



## THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

MAR 10 2009

The Honorable Carl Levin  
Chairman, Committee on Armed Services  
United States Senate  
Washington, DC 20510

Dear Mr. Chairman:

The enclosed report responds to Section 719 of H.R. 5122, the National Defense Authorization Act for Fiscal Year 2007 that requires the Secretary of Defense to enter into a contract with a qualified independent academic medical organization, "for the purpose of conducting an independent review of the Department of Defense medical quality improvement program." The fair opportunity contract to conduct the review was awarded to Lumetra, a nationally recognized health care organization with a mission to improve the quality, safety, and integrity of health care.

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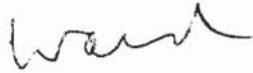
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To ensure the maximum benefit of the review completed by Lumetra, the recommendations will be briefed, analyzed and staffed by clinical quality leadership from across the system through the MHS Clinical Quality Forum. As the recommendations are developed mainly from qualitative data based on the perceptions of leaders and staff, clarification and confirmation of the improvement opportunities is required. The Clinical Quality Forum serves as an excellent mechanism to complete this analysis. The Clinical Quality Forum reports quarterly to MHS senior leadership. These reports will include updates on the analysis and implementation of Lumetra's recommendations. A report on

the outcomes and status of these recommendations will be incorporated into the annual report to Congress on the quality of care provided by the Department of Defense.

Thank you for your continued support of the Military Health System.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Ward Casscells".

S. Ward Casscells, MD

Enclosure:  
As stated

cc:  
The Honorable John McCain  
Ranking Member



## THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

MAR 10 2009

The Honorable Ben Nelson  
Chairman, Subcommittee on Personnel  
Committee on Armed Services  
United States Senate  
Washington, DC 20510

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S. Ward Casscells, MD

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The Honorable Lindsey O. Graham  
Ranking Member



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HEALTH AFFAIRS

MAR 10 2009

The Honorable Ike Skelton  
Chairman, Committee on Armed Services  
U.S. House of Representatives  
Washington, DC 20515

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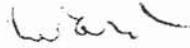
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The Honorable John M. McHugh  
Ranking Member



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HEALTH AFFAIRS

MAR 10 2009

The Honorable Daniel K. Inouye  
Chairman, Committee on Appropriations  
United States Senate  
Washington, DC 20510

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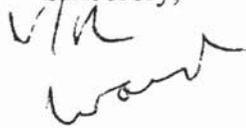
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S. Ward Casscells, MD

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As stated

cc:  
The Honorable Thad Cochran  
Ranking Member



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### HEALTH AFFAIRS

MAR 10 2009

The Honorable David R. Obey  
Chairman, Committee on Appropriations  
U.S. House of Representatives  
Washington, DC 20515

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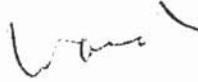
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S. Ward Casscells, MD

Enclosure:  
As stated

cc:  
The Honorable Jerry Lewis  
Ranking Member



## THE ASSISTANT SECRETARY OF DEFENSE

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### HEALTH AFFAIRS

MAR 10 2009

The Honorable John P. Murtha  
Chairman, Subcommittee on Defense  
Committee on Appropriations  
U.S. House of Representatives  
Washington, DC 20515

Dear Mr. Chairman:

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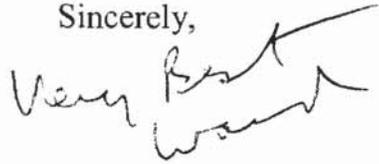
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Sincerely,

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S. Ward Casscells, MD

Enclosure:  
As stated

cc:  
The Honorable C. W. Bill Young  
Ranking Member



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WASHINGTON, DC 20301-1200

### HEALTH AFFAIRS

MAR 10 2009

The Honorable Susan Davis  
Chairwoman, Subcommittee on Military Personnel  
Committee on Armed Services  
U.S. House of Representatives  
Washington, DC 20515

Dear Madam Chairwoman:

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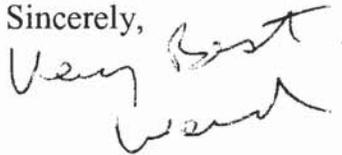
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S. Ward Casscells, MD

Enclosure:  
As stated

cc:  
The Honorable Joe Wilson  
Ranking Member



# Lumetra

Brighter insights. Better healthcare.

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## External Review of the DoD Medical Quality Improvement Program

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This study was prepared by Lumetra under contract with the U.S. Department of Defense (DoD) (PO GS 10FO 183S – Task Order W81XWH-07-F-0511). The conclusions and opinions expressed are the authors' alone and do not necessarily represent those of the DoD.

Lumetra is an independent, nonprofit, healthcare consulting organization dedicated to improving the quality, safety, and integrity of healthcare.

For more information, please contact:

**Lumetra**  
**One Sansome Street**  
**San Francisco, CA 94104**  
**Phone: (415) 677-2000**  
**URL: [www.lumetra.com](http://www.lumetra.com)**



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# Executive Summary

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## Introduction

This report describes the findings of a congressionally mandated assessment of the Military Health System's (MHS) Medical Quality Improvement Program (MQIP). This assessment was conducted from October 2007 through July 2008. The purpose of the report is to address how well the Department of Defense (DoD) is managing medical quality in their healthcare system as outlined in the 2007 National Defense Authorization Act (NDAA).

Several specified tasks were outlined; in particular, the review was to include an assessment of the methods used by the DoD to monitor medical quality of services provided in military hospitals and clinics, as well as of services provided by civilian hospitals and providers under the military healthcare system. Additional areas of assessment included:

- The patient safety program
- Transparency and public reporting
- Accountability for negligence
- Collaborations with national initiatives
- Comparison with other private and public organizations

## Methods

The Project Team performed an extensive review of quality and patient safety regulations and directives, previous reports on quality and patient safety, published literature, and information available on the Internet about MHS medical quality and patient safety. More than 60 key TRICARE Management Activity (TMA) and Service (Army, Navy, and Air Force) medical leaders were interviewed to gain a comprehensive understanding of the structures and processes of the quality and safety programs.

The Project Team also conducted interviews with over 500 clinical and quality managers in 54 Army, Navy, and Air Force military treatment facilities (MTFs) across the United States and overseas, as well as an online survey of 394 clinical and quality department managers and staff.

## Key Findings and Associated Recommendations

The MHS is a complex, dynamic, and extensive system providing healthcare to a diverse set of beneficiaries in a variety of settings both in peacetime and in war. The men and women of the MHS are a highly professional group dedicated to providing the best medical care to all of their patients. Healthcare is provided through two distinct systems: the Direct Care system comprised of facilities operated by the Army, Navy and Air Force, and the Purchased Care system, where care is contracted out to civilian providers. In recent years the relative size of the two systems has shifted to the point where the Purchased Care system now accounts for 70 percent of the military health care dollar. Much of this shift is due to Base Realignment and Closures (BRAC) that closed many underutilized facilities and instituted other organizational changes.

## Leadership

MHS senior leaders established quality and patient safety programs that are often evidence-based and comprehensive, with Health Affairs and TRICARE Management Activity (TMA) setting policy and standards and the Service Surgeons General and contractors executing those policies. The MHS should be commended for the work performed to establish comprehensive quality management and

patient safety programs. MHS quality and patient safety programs are generally comparable to those found in civilian facilities, and the MHS processes to establish criteria and measure quality are of high standard.

The Office of the Chief Medical Officer at TMA has established several mechanisms to address the quality programs for both Direct and Purchased Care, so that improvements can be facilitated throughout the complex system. Of significance is the work of the MHS Clinical Quality Forum (MHS CQF) and its subcommittees. The MHS CQF brings together key parties to discuss quality issues on a monthly basis. Its membership includes DoD and Service representatives as well as TMA representatives for the purchased care system, but currently does not have representation from the medical assets within the operational (deployed organizations), functional (e.g., transportation, communication, information technology), or line commands (direct commanders).

The Project Team identified several areas within the program that could benefit from quality improvement activities. Some of these areas are already in the process of being improved by the DoD. Of particular importance is the new DoD Quality Improvement Manual to be published later this year. The manual, authored by subject matter experts from across the MHS and coordinated through the MHS Clinical Quality Forum (MHS CQF), will provide updated guidance to strengthen the program going forward.

### **Leadership Recommendations**

- Continue to promote a culture of safety and quality from MTF commanders and leaders in which problems, near misses, and errors are reported, discussed, and acted upon without the risk of blame or guilt
- Incorporate a comprehensive, standardized Quality Management module within and across Services into command training across the MHS to develop an officer and leadership corps deep-rooted with quality and safety
- Assign a lead entity that provides clear guidance on Base Realignment and Closure (BRAC) initiatives, specifying which Service should take the lead if the activity involves more than one Service
- Include representation from Force Health Protection and Readiness, the Joint Staff Surgeon's office at the command level, and Navy Fleet and Marine forces on the MHS Clinical Quality Forum

### **Resources**

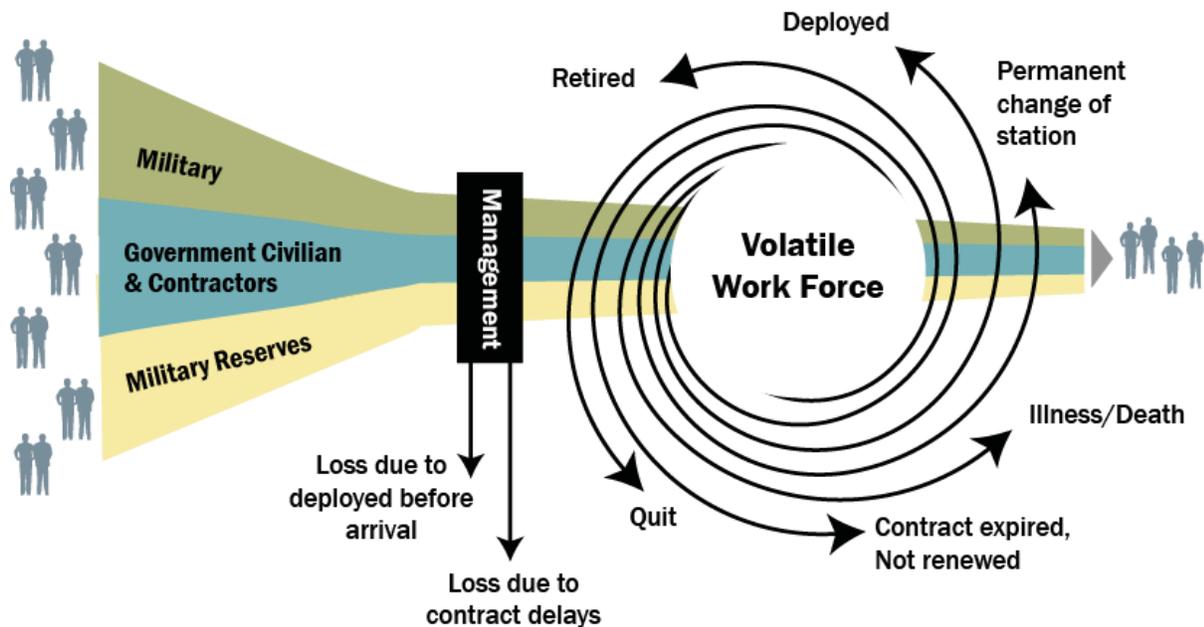
#### **Staffing**

Staff turnover is a major challenge in the Direct Care system. Staffing issues in the military are not comparable to those in the private civilian sector. The military has a long history of transitioning personnel between units. While this practice may have its benefits, it also generates high turnover rates that result in a volatile workforce. The situation is magnified in times of increased operational activities. Staff rotations affecting key leadership roles such as an MTF's patient safety or quality manager can adversely affect patient care. Differences in systems and process across MTFs leave little time to train new staff in local procedures. By the time new staff become familiar with local processes they leave. Greater standardization of key programs and processes would mitigate disruptions due to rotations.

Civilian and/or short-term contract workers fill the patient safety and quality manager roles at many MTFs. The long process of civilian hiring complicates filling these positions for all MTFs. However, local issues such as remote locations, lack of a local candidate pool, and disparate salary markets further challenge some MTFs. The combination of active duty rotations, and lengthy civilian hiring

processes results in vacancies in key management positions. Figure 1 illustrates the cyclical and synergistic effects of increased activities, permanent change status and civilian contract delays.

**Figure 1: Issues contributing to a volatile workforce in the MHS**



### Staffing Recommendations

- Develop mechanisms to assist MTFs with staffing shortages affecting their quality departments to better manage patient safety and quality monitoring
- Implement a system across Services for reducing the frequency of reassignments (as opposed to deployments) of clinical staff during periods of high operational activities, within the primary mission of national security
- Provide Service Quality Leads with reports that include actual staffing numbers and unfilled positions of key Quality Management, Performance Improvement, and Patient Safety staff
- Consider making the Quality Management and Patient Safety Managers permanent civilian positions to enhance the stability of the program
- Streamline the process for hiring civilian staff to improve the speed and flexibility of filling positions

### Information Systems

The MHS has collaborated with a number of agencies to develop an electronic health record called AHLTA. This outpatient electronic health record is the product of years of work and substantial financial investments. Currently AHLTA supports outpatient services at direct care MTFs. There is no single interoperable medical record that follows an MHS beneficiary continuously in battlefield triage, inpatient and outpatient settings for direct care, in Purchased care, or through the VA system.

AHLTA developers are committed to improving the system, and they are working toward that end. However, there appear to be discrepancies between developer responses to written questions about AHLTA and the experiences reported by end-users at the MTF level. End-users acknowledged the potential power of an MHS wide electronic health record, but expressed dissatisfaction with AHLTA's performance. Reasons cited include slow response time, lack of user-friendliness, and lack of interoperability with other systems. Other information system limitations such as old computers or slow connectivity to the database server may contribute to performance problems. In addition to end user's stated issues with AHLTA, there are proficiency and knowledge gaps between expert and everyday users. It is important for MHS to address the differences in perspectives whether they are related to hardware, software, individual MTF implementation, or user training to enhance the use and acceptance of AHLTA.

The MHS Population Health Portal is a powerful tool for quality management, disease management, and other oversight and research activities. This tool is used at some, but not all MTFs. Barriers to its universal use include lack of knowledge of its existence and capabilities, lack of training in its use, lack of staff with the analytical skills to use the application and dissatisfaction with the accuracy and timeliness of its data.

### **Information Systems Recommendations**

- Address the communication discrepancies between the AHLTA leadership perception and the end-users experience using AHLTA. Develop a comprehensive and efficient electronic medical healthcare record for all DoD beneficiaries, including those in the TRICARE and VA systems, as recommended in the Healthcare Quality Initiatives Review Panel report.
- Develop an accessible, interoperable electronic medical record that follows a warrior continuously from the initial site of battlefield triage, through interim care and medical transport to the ultimate treatment site.
- Work with the MHS Population Health Portal team and Services to improve data accuracy, timeliness and interoperability with other systems.

## **Quality and Patient Safety Oversight**

### **Quality Management**

Through the MHS CQF and its subcommittees, DoD provides oversight, guidance and direction for quality management and quality improvement and monitors overall performance. Individual MTFs also monitor their own performance and conduct local quality improvement projects. Many MTFs reported a need for assistance in performing the analytical components of these activities. They would benefit from a single comprehensive quality management program modeled after the patient safety program that includes standardized tools, strategies, and mechanisms with clear directions on their use. A standardized electronic dashboard that MTFs could use to track and trend their data would reduce the local staff time currently used in developing individual programs. Many facilities reported a lack of access to individuals with the time and analytical skills to conduct these activities.

### **Quality Management Recommendations**

- Standardize education, skill development, data collection methods, dashboards for facility reporting, and process improvement methods to be used by all MTFs for performance improvement
- Prioritize required reporting of metrics from MTFs
- Design a template for reporting MTF-specific quality data on their public Web site to ensure reporting quality consistency across the MHS

- Provide staff who can assist MTF-level personnel gain greater expertise in the appropriate collection, analysis, and application of quality data
- Expand communication with facilities on the quality metrics, standards, and definitions developed in the Clinical Measures Steering Panel (CMSP) to promote consistency of quality data reporting across the Services
- To enhance opportunities for “lessons learned”, TMA and Services should ensure the existence of operable mechanisms for obtaining actionable feedback on root cause analyses or patient safety events that have occurred at their or other MTFs
- Assign a full time Quality/Patient Safety Manager to the Command Joint Task Force Surgeon staff to act as a Subject Matter Expert consultant to the theater for quality and patient safety matters. Direct that this person be responsible for coordinating, overseeing, and reporting quality and patient safety issues to the command.

### **Patient Safety**

The MHS has developed and implemented a strong patient safety program with standardized procedures and tools that are used at all direct care facilities. The MHS and Service leadership have encouraged a non-punitive culture to report, assess and fix patient safety problems. At the MTF level, this culture was common, but not universal.

Many patient safety staff felt overwhelmed by duplicated patient safety alerts and advisories. They also do not have a standardized mechanism to ensure that all appropriate staff received the alerts. Another problem is the lack standardization of mechanisms for reporting patient safety events as well as the language used to describe these events.

### **Patient Safety Recommendations**

- Adopt a standard taxonomy for clinical and dental patient safety events including “near misses” that can be shared with Risk Management
- Support the use of a single “closed loop” system for all alerts and advisories, whereby leadership can quickly determine whether the alert or advisory was received and what actions have been taken at each location
- Determine the amount of facility-identifiable data that can be shared with the Patient Safety Center to accomplish complete epidemiological analyses for leadership of the Patient Safety Program and key DoD leaders
- Evaluate the benefits versus costs of establishing permanent Patient Safety Coordinator positions
- Formulate research priorities and set an agenda demonstrating what changes are needed in the practice setting to enhance Patient Safety
- Continue to assess the MTF variability of reporting “near miss” reports, reduce that variability, and encourage the submission of “near miss” reporting at the lowest level of staff
- Reduce Patient Safety events through the use of human factors engineering investigations and the use of simulation centers addressing human factors elements that may be elucidated from root cause analyses or other event reporting
- Transfer existing internal transparency within and across Services down to the MTF level
- Accelerate the diffusion of TeamSTEPSTM methods to assure program sustainability and mitigate the effects of high facility personnel turnover

## **Credentialing, Peer Review, and Risk Management**

DoD has established processes and tools to ensure that all MTFs are accredited where appropriate and all clinical staff are properly credentialed and privileged. All MTFs conducted peer review in accordance with DoD and Service regulations. Furthermore, if peer review determines that standards of care are not met all MTFs have processes for reporting and holding individuals accountable. Although Risk Managers and Patient Safety Managers work closely in monitoring reported events and near misses, their activities separate when there is a determination that standards of care are not met.

These activities are supported by the Centralized Credentials Quality Assurance System (CCQAS) software. The full capabilities of this application have not been fully utilized by all MTFs, leading to duplication of effort due to the creation and maintenance of paper copies of credentialing and privileging documents.

### **Credentialing, Peer Review, and Risk Management Recommendations**

- Accelerate implementation of all modules of the CCQAS across MHS
- Provide timely and appropriate training in the use of CCQAS, so that all risk management, peer review, and credentialing functions are performed electronically without duplication.

## **Military Health System Quality Across the Continuum**

Transparency of health care information and public reporting on healthcare cost and quality measures can improve patient care. The TRICARE Management Activity website provides information to service members, consumers and its beneficiaries on their plans, costs, and evaluations of their programs. In the Direct Care system individual MTFs report quality data as directed up the chain of command, but MTFs are limited in the data they can report to the public because of current federal statutes. For the Purchased Care System, the Managed Care Support Contractors reported that their data was transparent and widely available to the public.

The MHS is proud to provide the same care to all eligible individuals regardless of their race, ethnicity, gender, or rank. There was no reported evidence to contradict this assertion, but confirmation would require the collection of demographic data on each beneficiary. Since the Purchased Care system contracts with providers from the community, it is likely that there are disparities associated with beneficiary demographics such as race and gender. The lack of demographic data prevents the same assessment of the extent to which some MHS purchased care beneficiaries are affected by the disparities in civilian healthcare.

The MHS has comprehensive partnerships with other federal agencies such as the Department of Health & Human Services, the Department of Veteran's Affairs, the Food and Drug Administration, and the Centers for Disease Control and Prevention. MHS also participates in national activities with entities such as the Joint Commission and the National Quality Forum. A particularly successful collaboration between the Agency for Health Care Research and Quality led to the development of TeamSTEPPS™, a nationally recognized program to improve patient outcomes through more effective communications and teamwork.

Specific departments within MTFs report collaborations with local, regional, or national organizations. For example, some Infectious Disease staff work with local public health departments for the purposes of improving internal surveillance and comparing infection rates. Laboratory departments across Services report collaboration via the TRICARE Joint Working Group and the Joint Lab Working Group to strategize and eventually implement an automated and integrated laboratory data transfer system that uses standardized terminology. Trauma and or Surgery departments report working alongside the American College of Surgeons or participating in the Surgical Care Improvement Project (SCIP) for best practices in Combat Trauma Care and surgery outcomes.

### **Military Health System Quality Across the Continuum Recommendations**

- Continue, within the boundaries of federal statute, to work on mechanisms to increase quality transparency, both internally and externally. Solicit end-user feedback in the design and implementation of transparency initiatives.
- Direct MTFs to regularly collect demographic data in their beneficiary population to allow them to customize healthcare and to anticipate issues around beneficiary needs
- Create a mechanism for Direct Care and Purchased Care clinicians to view data on shared beneficiaries, enabling a complete clinical picture for improved preventive health, chronic disease management, and patient safety
- Initiate a system that would allow the Managed Care Support Contractors (MCSCs) to have full access to pharmacy data to better oversee their disease management programs
- Modify current Code of Federal Regulation to remove the requirement for the redundant and costly National Quality Monitoring Contractor certification of mental and behavioral health facilities. The facilities are already Joint Commission-accredited.
- Continue the current performance-based contracts with incentives for the Managed Care Support Contractors (MCSC) that have led to a more competitive and less audit-intensive program

### **General Recommendations**

- Congress should allow DoD, Services, and the MTF Commanders flexibility to apply directed funding and other medical resources to the areas of greatest need within the priorities set by Congress

# Chapter 1: Background

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The quality of healthcare has been a focus of intense scrutiny by leaders in healthcare and the American public for several years. In 1998, the Institute of Medicine (IOM) Committee on the Quality of Health Care in America was tasked to develop a strategy that would result in an improvement in quality over the ensuing ten years. The committee published two reports, *To Err is Human: Building a Safer Health System*<sup>1</sup> and *Crossing the Quality Chasm: A New Health System for the 21<sup>st</sup> Century*<sup>2</sup>. These reports identified strategies for improving the quality of healthcare delivered to Americans. The first report focused specifically on issues affecting patient safety, while the second report addressed improving the overall healthcare delivery system. These reports emphasized the weaknesses in the system of quality in American healthcare and brought about a national effort to redesign the system with a focus on optimizing responsiveness to patient needs.

One of the major results of the IOM committee work was to provide six specific aims for improving the system (*Crossing the Quality Chasm*, 2001). The committee stated that healthcare should be:

- Safe – avoiding injuries to patients from the very care that is supposed to help them.
- Effective – providing services based on scientific knowledge to those who could benefit (avoiding underuse), and refraining from providing care to those who are unlikely to benefit (avoiding overuse).
- Patient-centered – providing healthcare that is respectful of, and responsive to, the individual preferences, needs, and values of patients to ensure patients guide all clinical decisions.
- Timely – reducing waits and potentially harmful delays for those who receive and those who provide healthcare.
- Efficient – avoiding waste, particularly in equipment, supplies, ideas, and energy.
- Equitable – providing quality of care that does not vary because of personal characteristics such as gender, ethnicity, geographic location, or socioeconomic status.

This review has incorporated these six aims into our assessment model, as discussed in Chapter 3.

Similar efforts in quality improvement were being made in the military healthcare system around the same time as the first IOM report was published. In 1999, Congress commissioned a special report on the quality of care provided in the military in response to headlines in the Cox News Service - Dayton (Ohio) Daily News<sup>3</sup>. This series of news reports described outcomes from the military healthcare system that had a negative impact on the lives of patients and families. The results of these reports caused great concern on the part of the American public and Congress that the military healthcare system was providing substandard care to service members and their families.

In 1999, in response to these findings, the Assistant Secretary of Defense for Health Affairs (ASD (HA)) developed 13 actions to address the issues reported in the Dayton Daily News. Subsequently that same year, Congress chartered the Department of Defense (DoD) Healthcare Quality Initiatives Review Panel (HQIRP) as a Federal Advisory Committee “to assess whether all reasonable measures” had been taken to ensure that the Military Health Services System delivered healthcare

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<sup>1</sup> Institute of Medicine. *To Err is Human: Building a Safer Health System*. Kohn, LT, Corrigan, JM, Donaldson, MS, eds. Washington, DC: National Academy Press, 1999.

<sup>2</sup> Institute of Medicine. *Crossing the Quality Chasm: A New Health System for the 21<sup>st</sup> Century*. Institute of Medicine. Washington, DC: National Academy Press, 2001.

<sup>3</sup> Dayton Daily News, reported by Jeff Corrollo and Nesmith.

services in accordance with consistently high professional standards<sup>4</sup>. A ten-member independent panel with staff support provided by a government contractor and coordination through the TRICARE Management Activity (TMA) conducted an 18 month assessment. The panel conducted its work through public meetings, site visits, and interviews with the Surgeons General, as well as communication with the public via Web site. The panel was supported by a \$4.7 million budget intended for administrative support and to initiate or accelerate Military Health System (MHS) quality improvement activities.

The panel identified two common issues associated with the majority of complaints published in the Cox News reports. These issues were 1) staffing issues (quantity, competency, and continuity) and 2) medical record issues (accuracy, completeness, timeliness, and continuity). The panel regarded these issues as sentinel aspects of policy development and resource management (acquisition, allocation, and stability) and made four general recommendations, summarized below:

1. Implement a Unified Military Medical Command to achieve stability and uniformity of healthcare processes and resource acquisition, and to manage an error reduction and safety program.
2. Achieve comparability of oversight and accountability across the TRICARE spectrum – including both the Direct Care and Purchased Care components.
3. Expand and refine credentials management for all healthcare professionals in the MHS.
4. Install robust, comprehensive data systems capable of measuring and monitoring quality outcomes, resource utilization, and healthcare costs.

In addition, the Panel developed 44 specific recommendations (see Appendix A) to address the nine healthcare quality initiatives in its charter, summarized as follows:

1. Upgrade professional education and training requirements for military physicians and other healthcare providers.
2. Establish Centers of Excellence for complicated surgical procedures.
3. Make timely and complete reports to the National Practitioner Data Bank (NPDB) and eliminate backlogs.
4. Assure that MHS providers are properly licensed and have appropriate credentials.
5. Reestablish the Quality Management Report (QMR) to aid in early identification of compliance problems.
6. Improve communication with beneficiaries to provide comprehensive and objective information on the quality of care being provided.
7. Strengthen the national quality management program.
8. Ensure that all laboratory work meets professional standards.
9. Ensure the accuracy of patient data and information.

The current congressionally mandated review, as outlined in the National Defense Authorization Act (NDAA 2007), is meant to assess the progress MHS has made in quality improvement in the past several years. Moreover, Congress has additional interest in determining how the military is performing in areas of transparency and public reporting, collaboration of the MHS in national quality initiatives, and in comparison with other public and private healthcare systems and organizations.

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<sup>4</sup> Healthcare Quality Initiatives Review Panel Report, submitted to Congress July 2001.

This report is the culmination of a ten-month program evaluation (October 2007 – July 2008) in response to a congressionally mandated review of the Department of Defense (DoD) Military Health System Quality Improvement Program (MHSQIP). The NDAA 2007 specified the tasks required for the review, as follows:

- An assessment of the methods used by the DoD to monitor the quality of medical services provided by military hospitals and clinics and by civilian hospitals and providers under the military healthcare system.
- An assessment of the transparency and public reporting mechanisms of the DoD on medical quality.
- An assessment of how the DoD incorporates medical quality into performance measures for military and civilian healthcare providers within the MHS.
- An assessment of the DoD patient safety programs.
- A description of the extent to which the DoD seeks to address particular medical errors, and an assessment of the adequacy of such efforts.
- An assessment of the accountability within the military healthcare system for preventable negative outcomes involving negligence.
- An assessment of the performance of DoD healthcare safety and quality measures.
- An assessment of DoD collaboration with national initiatives to develop evidence-based quality measures and intervention strategies, especially the initiatives of the Agency for Health Care Research and Quality within the Department of Health and Human Services.
- A comparison of the methods, mechanisms, and programs and activities referred to in Chapters 1-8 with similar methods, mechanisms, programs, and activities used in other public and private healthcare systems and organizations.

## **Report Organization**

The report is organized into ten chapters beginning with an Executive Summary that presents key findings and recommendations. The chapters themselves provide a fairly complete description of the process and the findings; however, the reader looking for greater detail can refer to the Appendices.

## **Assumptions**

The MHS requires that all military treatment facilities or medical treatment facilities (MTFs)<sup>5</sup> be accredited. The project team did not attempt to review individual quality issues that would be evaluated during the accreditation process, assuming that accreditation through one of the accrediting bodies ensured those basic standards of quality were met. This task required that the Project Team review the quality improvement system (structures, processes, and outcomes) and did not ask that the team review the quality of individual patient care. Lumetra's task was to assess the systems that allow the military to plan, execute, measure, monitor, and improve their own quality of care.

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<sup>5</sup> The acronym MTF is referred to equally in TRICARE documentation as Military Treatment Facility and Medical Treatment Facility. Military Treatment Facilities may offer medical and/or dental treatment services, and can therefore be abbreviated as MTF, DTF, or MTF/DTF for Medical Treatment Facility or Dental Treatment Facility, or both.

TRICARE is the healthcare program serving active duty service members, National Guard and Reserve members, retirees, their families, survivors, and covered spouses worldwide. As a major component of the Military Health System, TRICARE brings together the healthcare resources of the uniformed services and supplements them with networks of civilian healthcare professionals, institutions, pharmacies, and suppliers to provide access to high quality healthcare services while maintaining the capability to support military operations. Throughout the report, the reference to Services means the Army, Navy, and Air Force. Throughout the report, TRICARE may be used interchangeably with the Military Health System (MHS) although the Project Team understands that TRICARE is usually thought of as the health care component. The MHS encompasses both the health care program and the military partners providing medical education, clinical research and support.

# Chapter 2: Quality Management Within the Military Health System

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## Overview

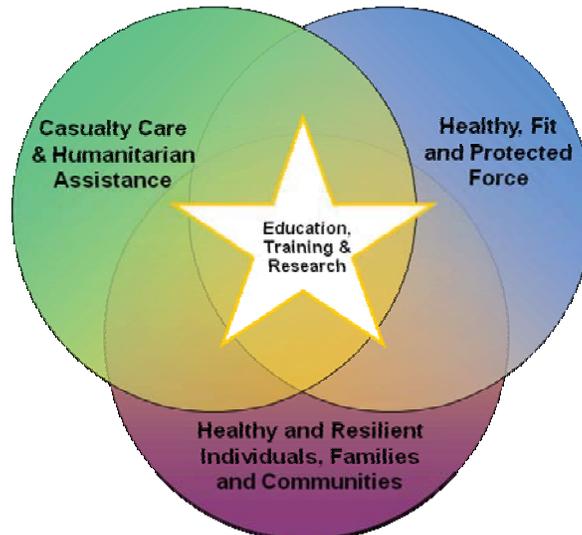
The Military Health System (MHS) aims to provide optimal health services in support of the nation’s military mission – anytime, anywhere to individuals, families, and communities (Figure 2.1). MHS is responsible for operational healthcare, including casualty care and humanitarian assistance; for peacetime healthcare (service members and their families, and retirees); and for providing a healthy, fit, and protected force. Selected facts on healthcare utilization in the MHS, including Direct and Purchase Care systems, are presented in Table 2.1.

The MHS Mission is carried out through two distinct systems:

1. **Direct Care** - This system is comprised of hospitals, clinics and healthcare personnel organic to the three Services: Army, Navy, and Air Force.
2. **Purchased Care** - The military purchases care by contracting with Managed Care Support Contractors, who in turn contract with civilian hospitals and healthcare personnel to provide services to those beneficiaries who cannot be seen in military treatment facilities (MTFs) by military providers. The military has a health benefit (entitlement) that is provided to all active duty military personnel, National Guard and Reserves, retirees, and their eligible family members. This entitlement program is TRICARE, and it is administered as a health plan for beneficiaries.

**Figure 2.1: The Military Health System Mission is to provide optimal health services... anytime, anywhere**

**Our team provides optimal Health Services in support of our nation's military mission—anytime, anywhere.**



**Table 2.1: Selected facts and figures  
from a typical week in the Military Health System**

			Services Type
			Claims processed
14,600	Purchased Care independent admissions	\$754,000,000	Weekly bill
			Medical centers and hospitals
642,400	Outpatient visits (Direct Care)	412	Medical clinics
			Dental clinics
2,100	Births (Total)	132,700	MHS personnel (Total)
			Military personnel
1,000	Direct Care births	46,300	Civilian personnel

## The Direct Care System

Military Services (Army, Navy, and Air Force) provide care in hospitals and clinics distributed throughout the United States and overseas. Quality Managers are included in the personnel structure of each of these hospital and clinics, as well as in the regional and medical commands. The responsibility for quality in Direct Care lies with the Surgeons General of each of the Services, who delegate, through command channels, the specific implementation, monitoring, and management to Quality Managers within each Service. The MTFs implement the Services quality program directives that are based on, and aligned with, policy established by the Assistant Secretary of Defense for Health Affairs (ASD (HA)).

Each Service structures and implements slightly different quality programs to accommodate its specific needs. This is partially due to differences in how Services provide command and control of the medical assets. The Army and Navy have separate commands for their medical units. The Air Force integrates their medical assets within their ten Major Commands (MAJCOMs), but has a separate operations agency for medical services. Below is a brief description of each of the Services:

- The US Army Medical Command (MEDCOM) is headquartered in San Antonio, Texas, with the Office of the Surgeon General located in Washington, DC. The Surgeon General is also the Commander, USA MEDCOM. The Army Quality Management Division is located at MEDCOM in San Antonio, Texas. The Army has six regional medical commands (RMCs), with varying numbers of staff responsible for monitoring the quality of care at the MTFs in each RMC. The MEDCOM Quality Management (QM) Division has sections responsible for credentialing/privileging, risk management, patient safety, and The Joint Commission accreditation oversight. In addition, the Evidence Based Practice section serves as the Department of Defense (DoD) lead for the development of VA/DoD Clinical Practice Guidelines. Dental care is provided under a separate command, the Army Dental Command (DENCOM), which works closely with MEDCOM QM to oversee the dental programs.

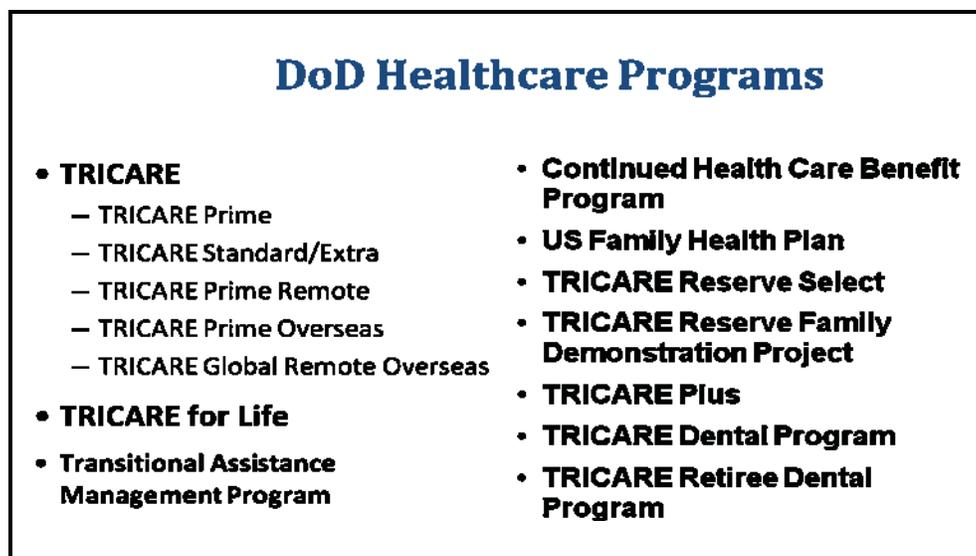
- The US Navy Bureau of Medicine (BUMED) and the Navy Office of the Surgeons General are located in Washington, DC. The Navy is responsible for healthcare for both their personnel and the Marines. The Navy has three RMCs providing quality oversight similar to the Army, however, their dental care is integrated with their medical except for three operational based dental commands; all other dental commands are integrated with their medical MTFs. There is a medical center co-located with the three RMCs, and the hospital commander also serves as the regional medical commander.
- The Air Force Medical Operations Agency (AFMOA) and the Air Force Surgeon General are currently located in Washington, DC. They plan to move the quality division to San Antonio, TX. Air Force medical commanders are integrated with other functional commanders into the MAJCOMs. The quality division is divided into four general areas: risk management, credentialing/privileging, patient safety, and standards for facility accreditation and quality improvement. Dental care is integrated into the medical assets.

## The Purchased Care System

The Purchased Care system is composed of DoD-contracted managed care organizations that assist with administering the TRICARE program by rendering care to eligible beneficiaries outside the MTFs (Direct Care system). Every Active Duty and Activated Guard and Reserve personnel is automatically enrolled in TRICARE Prime. However, families and retirees must choose one of the TRICARE plans. Their options are dependent on their military status and what plan best suits their needs (Figure 2.2), as follows:

- TRICARE Prime beneficiaries receive healthcare services from MTFs and/or network providers.
- TRICARE Standard is a fee-for-service option, and TRICARE Extra is a less costly preferred provider option.

**Figure 2.2: DoD Healthcare programs available to beneficiaries, excerpted from the MHS presentation *TRICARE Basics***



Congress defines the level of healthcare provided by DoD healthcare programs. To manage care within the Direct Care system, the DoD has prioritized the plans so that TRICARE Prime beneficiaries have the highest priority in receiving care in the MTFs. Beneficiaries under the other plans can be seen on a space-available basis in the Direct Care system, unless they are enrolled in the Designated Provider program.

The Purchased Care system has become increasingly important over the past several years. Base Realignment and Closures (BRAC) activities have closed many underutilized military hospitals and clinics within the system. These closures have limited the number of MTFs and healthcare personnel available to provide care to beneficiaries, causing a shift from a majority of care provided from Direct Care to Purchased Care. The latter now accounts for 70 percent of the military healthcare dollar<sup>6</sup>. While Purchased Care accounts for the greater proportion of military healthcare funding, its quality management program is the least controllable by DoD.

In any discussion of the Purchased Care network, it is essential to understand that it is similar to an insurance plan and cannot be compared across the board to the Direct Care system. DoD is responsible for providing equivalent quality of care to all beneficiaries, depending on their eligibility status.

### **TRICARE Management Activity**

TRICARE Management Activity (TMA) is responsible for implementing the healthcare policies, standards, and benefits for the MHS. In addition, TMA provides administrative and quality oversight, and makes recommendations for changes in the benefits available through TRICARE. This is done through a fairly complex bureaucratic organization involving both civilian and military leadership.

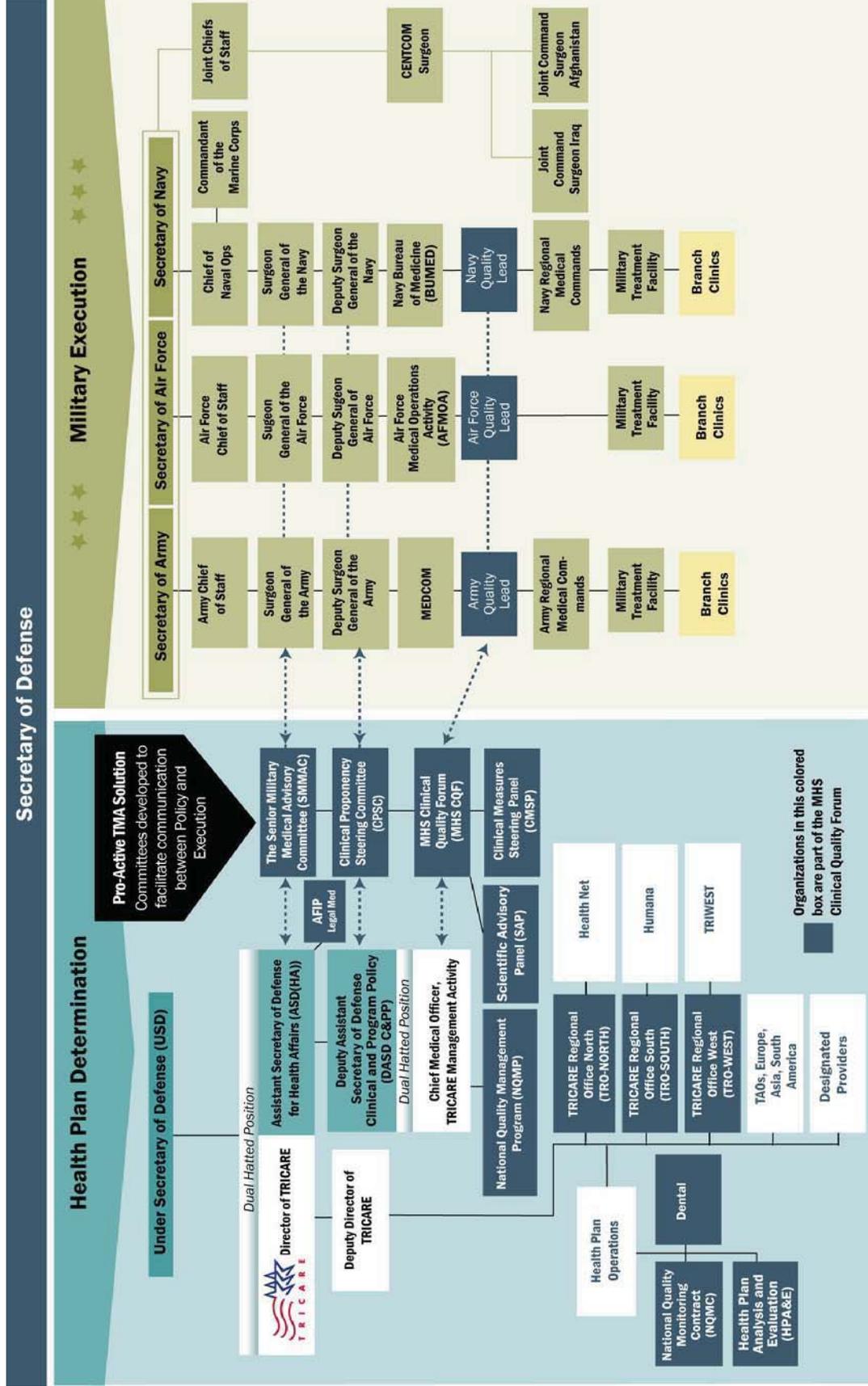
One side of the organization establishes policies and standards and is under the leadership of the Assistant Secretary of Defense for Health Affairs ASD (HA). TMA reports directly to the ASD (HA). TMA is responsible for providing quality oversight for Direct Care. TMA defines quality as the degree to which the MHS meets care requirements of beneficiaries. TMA also integrates Internal Quality Control components across Services to have a stable, high quality program; however, how the quality programs are implemented is up to the individual Services. The ASD (HA) has no operational control of Direct Care, because healthcare is executed by each individual Service (Army, Navy, and Air Force). The TMA also provides administrative and quality oversight of Purchased Care. Figure 2.3 shows a simplified diagram of the relationship between TMA and pertinent quality management departments within the MHS.

As can be seen from the multiple layers of structure, official communication and coordination between the ASD (HA) and the Offices of the Surgeons General within MHS occur only at the most senior level, making quick decision-making problematic. To provide a mechanism to facilitate continuous communication, the TMA Office of the Chief Medical Officer (OCMO), the entity responsible for quality oversight, recommended and coordinates several committees (See Appendix B for Committee Charters).

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<sup>6</sup> REF TRICARE 2008 Report to Congress

Figure 2.3: TMA and military components of the Military Health System



## TRICARE Clinical Quality Program

The purpose of the TRICARE Quality Management Program (QMP) is to continually improve MHS processes, systems, and tools to provide the highest quality services. The key focus of the QMP is to establish a planned, systematic, and comprehensive approach to measure, assess, and improve organizational performance. The QMP's scope is to maintain internal quality efforts at all organizational levels, and impact every individual in the organization. Table 2.2 highlights TRICARE integration activities.

TMA organizes its quality management program into four programmatic domains:

- Clinical Measures, including patient satisfaction
- Patient Safety
- Quality Assurance
- Quality Initiatives

The Clinical Measures program includes collecting data as required by The Joint Commission as well as additional measures for evaluation of the health plans. These measures are collected regularly throughout the year. Additional measures deemed necessary by DoD may be collected for any TMA-requested special study or for MHS measures.

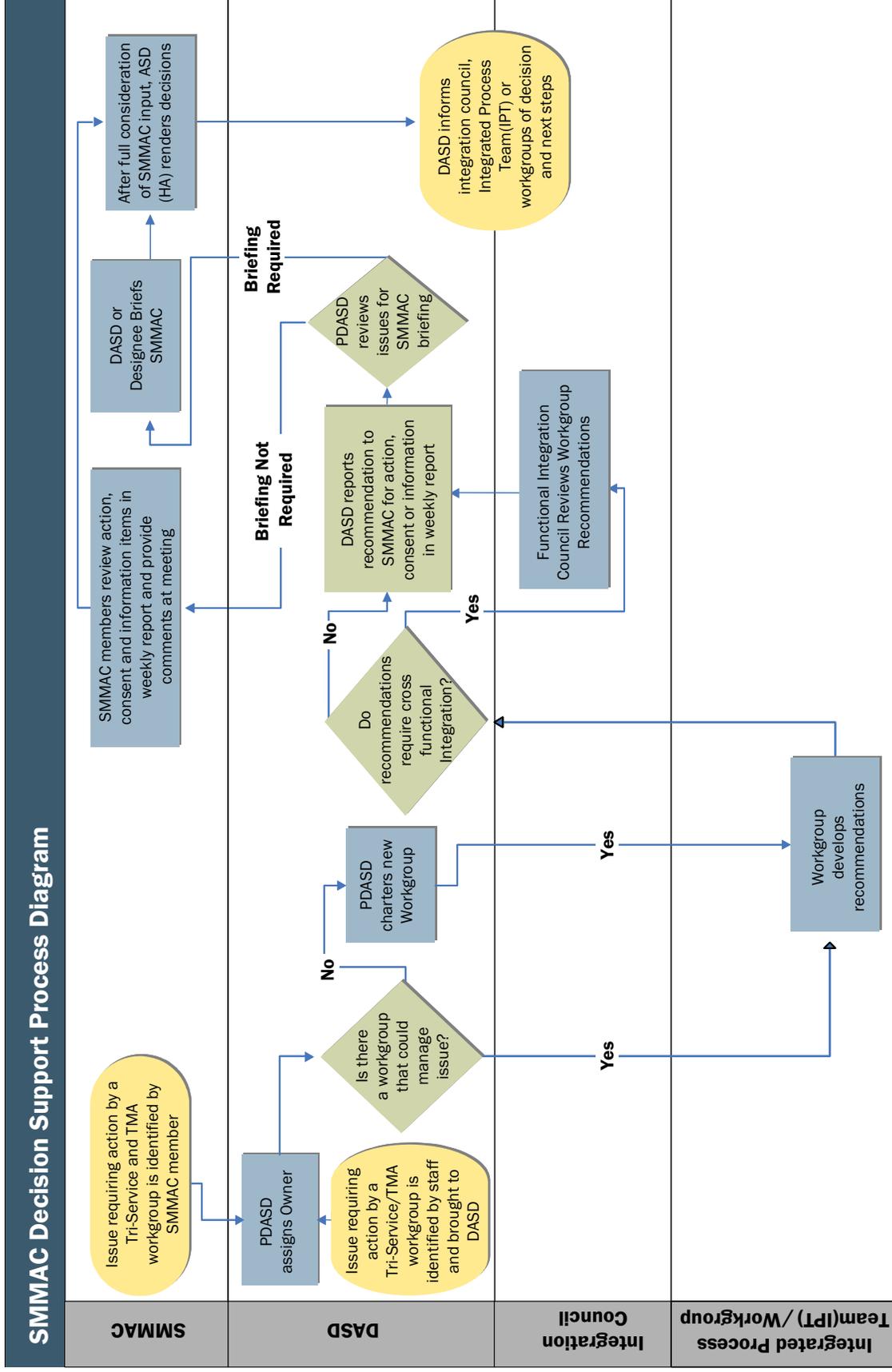
Patient satisfaction surveys are another way the DoD measures clinical quality. The Patient Safety program monitors sentinel events and near misses (discussed in Chapter 5). The Quality Assurance program includes efforts by the DoD to make sure that providers are meeting standards of care, while Quality Initiatives are the actual performance improvement efforts by the DoD.

**Table 2.2: Senior medical leaders at TRICARE Management Activity chair and participate in integration councils to ensure functional integration of complex MHS issues.**

	Name of Integration Council
Principal Deputy Assistant Secretary of Defense for Health Affairs (PDASD)	Strategic Management Review Council
Deputy Director TMA	Joint Health Operations Council
Deputy Assistant Secretary of Defense (DASD) for Health Budgets and Financial Policy / Chief Financial Officer (CFO)	CFO Integration Council
Deputy Assistant Secretary of Defense for Force Health Protection and Readiness DASD (FHP&R)	Force Health Protection Council
Deputy Assistant Secretary of Defense for Clinical and Program Policy (C&PP)/ Chief Medical Officer	Clinical Proponency Steering Committee
Chief Information Officer (CIO)	Portfolio Management Oversight Committee
Assistant Secretary of Defense (Health Affairs)	Senior Military Medical Advisory Committee (SMMAC)

Membership in each of the TMA Quality committees varies and is spelled out in the charters (Appendix B). Figure 2.4 shows the major committee structures and decision support processes in effect at the various management levels. Patient Safety committees are discussed in Chapter 5.

Figure 2-4: TMA decision-making matrix



## Roles and Responsibilities of TRICARE Clinical Quality Committees

The purpose of TMA committees is to address common quality issues and come to a consensus on recommendation of corrective action plans when possible. Following is a description of each committee's roles and responsibilities:

- The MHS Clinical Quality Forum (MHS CQF) is a collaborative committee with oversight responsibility for clinical quality assessment across the TRICARE Military Health System. The Forum meets monthly, and is primarily responsible for monitoring key performance indicators and evaluating the quality of healthcare provided to DoD beneficiaries. Healthcare quality is assessed based upon relevant clinical performance improvement indicators of healthcare system performance, beneficiary and stakeholder perceptions of the quality of healthcare, and activities focusing on quality assurance/risk management parameters. The committee members are all Health Affairs, TMA and Service senior leaders associated with the various quality and patient safety programs, program managers of the contracted services organizations for Purchased and Direct Care, and TRICARE Regional Office Quality Managers. Other committees are invited to attend when involved in the topics on the agenda. Specific functions of the committee include:
  - Identify key MHS quality indicators used to assess the quality of care provided to beneficiaries.
  - Gather and analyze information on the quality of healthcare provided in the MHS.
  - Formulate recommendations to Health Affairs/TMA leadership based on the analysis of MHS-specific quality initiatives, including the development of new initiatives and the elimination of others.
  - Disseminate quality information throughout the MHS to advocate adoption of best practices.
  - Review DoD policies, instructions, or directives pertaining to clinical quality oversight, and make recommendations for modification of such policies, instructions or directives.
  - Provide advice on content and editorial feedback for the annual DoD Quality of Healthcare Report submitted by the ASD (HA) to Congress.
  
- The Scientific Advisory Panel (SAP) oversees DoD special clinical studies. (See Appendix C for a list of special studies conducted.) Committee members are appointed by TMA and each of the Services. In addition, the panel includes representatives from Population Health Support Division and Health Program Analysis and Evaluation (HPA&E), supported by a contractor responsible for conducting special studies for TMA. These studies are designed to examine care processes in the military against national benchmarks or best practices. To ensure an unbiased analysis of each specific study topic, contractors conduct the studies. The committee reports to the MHS Clinical Quality Forum semiannually. The SAP has the following specific responsibilities:
  - Identify and select topics for special clinical studies that are aligned with the strategic direction of the MHS and the clinical needs of the beneficiaries.
  - Provide guidance and make recommendations on the design of and methodology for the special studies, to ensure they are scientifically sound.
  - Provide ongoing information on the status and results of the special studies to Service and Health Affairs/TMA leadership
  - Facilitate the linkage between clinical outcomes and MTF performance by communicating study findings and recommendations to appropriate MHS facilities and personnel.

- Advocate for improved performance as opportunities are identified by the studies' findings.
- The Clinical Measures Steering Panel is a collaborative Health Affairs/TMA and Services committee responsible for guiding the clinical measures and The Joint Commission ORYX<sup>®</sup> hospital measures. Membership includes representatives from each Service and Health Affairs/TMA. The panel provides a written report to the MHS CQF semiannually. Its specific responsibilities include:
  - Provide recommendations for the selection, collection and analysis of MHS clinical quality measures.
  - Provide oversight of the monthly collection of raw data from medical records and centralized databases.
  - Monitor The Joint Commission's quarterly report submission process, ensuring MTF access to facility-specific data downloads from the secure host Web site.
  - Consolidate MTF data for a DoD corporate view.
  - Facilitate MTF actions and improvement efforts for measures that are below the national benchmark.
  - Communicate the analysis of the data to MHS leadership through the MHS Clinical Quality Forum.

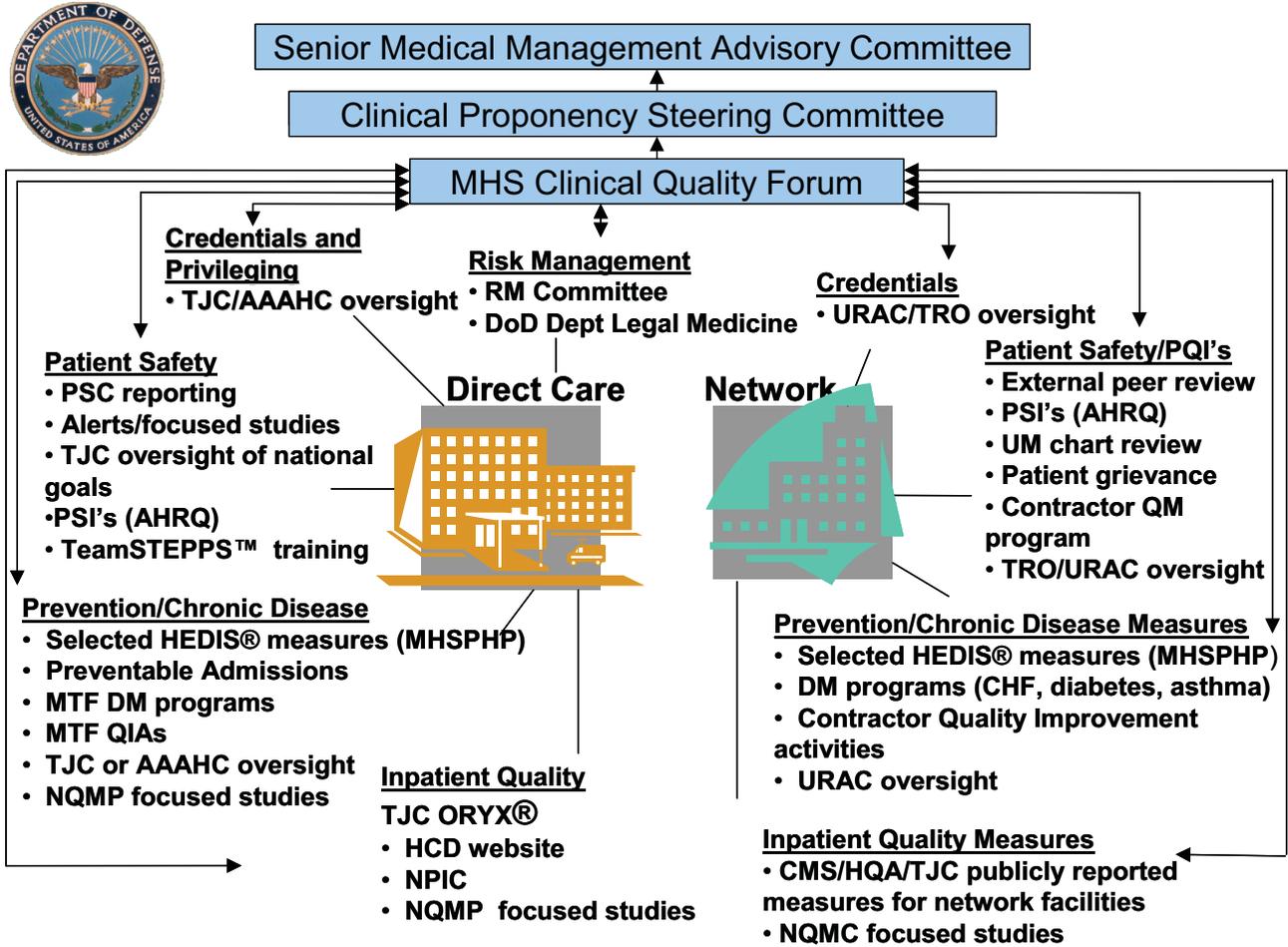
### **Additional Structures**

TMA has several other departments that participate in managing and monitoring quality care for beneficiaries. They are:

- The Force Health Protection and Readiness Program, responsible for quality of care within deployed operational units in a theatre of operations.
- The Patient Safety Program Office, responsible for the patient safety programs discussed in detail in Chapter 5.
- The Population Health and Medical Management Division, responsible for chronic disease management programs.
- The Mental Health Division, responsible for mental health programs of the force.

Components of the MHS quality program can be viewed in Figure 2.5. This is a graphic display of quality and patient safety programs and initiatives in the MHS, and their general relationship to the Direct and Purchased Care systems.

Figure 2.5: Components of MHS Clinical Quality Management



## Purchased Care (TRICARE) Quality Programs by Regions

The Purchased Care system presents its own set of complexities. The Managed Care Support Contractors (MCSCs) administer the TRICARE health plan in three geographic regions, shown in Figure 2.6. Three TRICARE Regional Offices (TROs), one located within each geographic region of the MCSC, supervise their activities on behalf of TMA. Additionally, three TRICARE Area Operations offices manage the health plans outside the continental United States (OCONUS) for Europe, Asia, and Southern and Central America. Six Designated Providers located in separate geographic regions also report to TMA.

**Figure 2.6: Current TRICARE Regions**



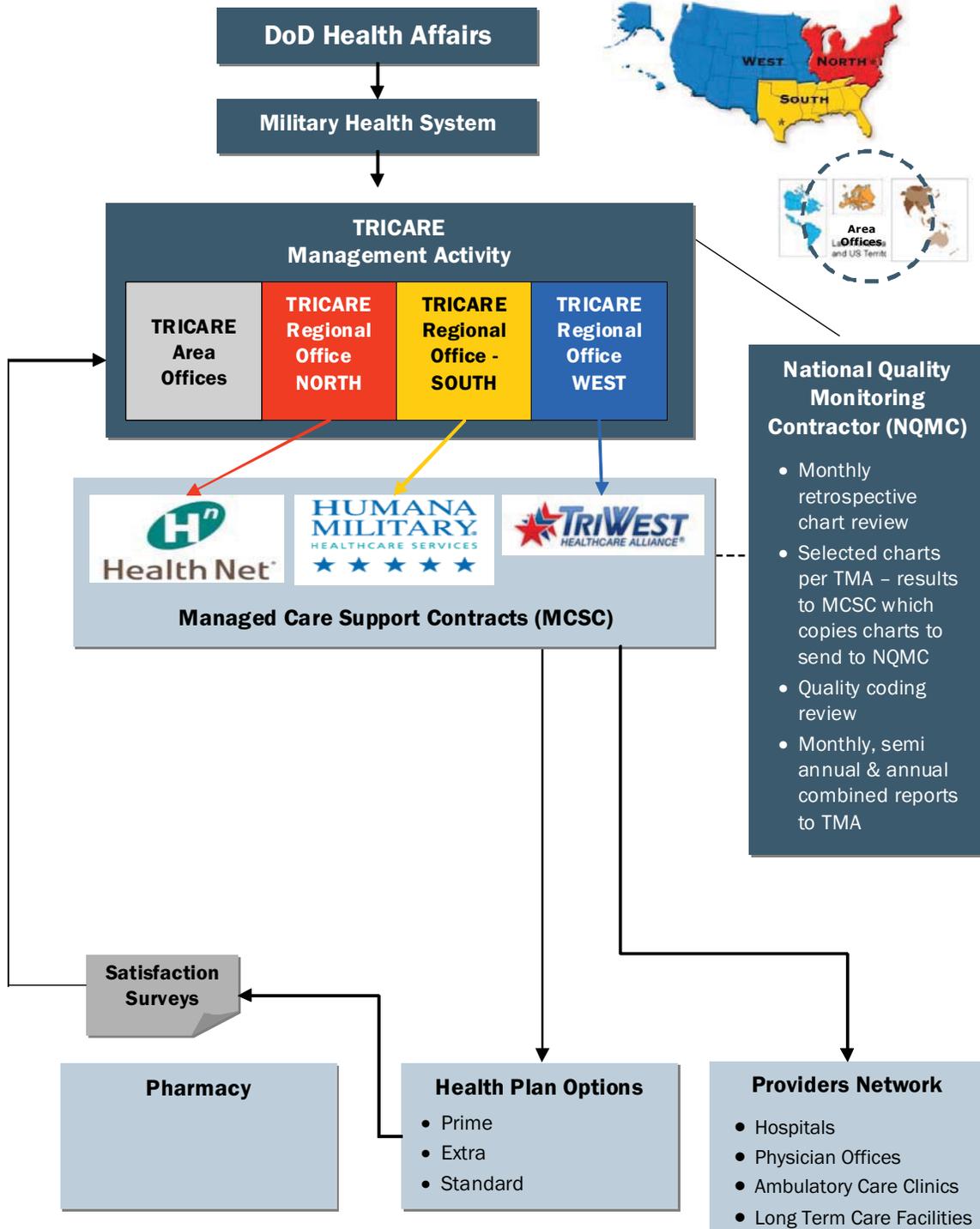
### TRICARE Regional Office Roles

The three TROs, known as TRO-North, TRO-South, and TRO-West, are similarly organized. A military physician is the Director Clinical Operations/Medical Director. A Quality Manager, typically a registered nurse, is responsible for the quality program. Figure 2.7 shows an overview of TMA management. Specifically, the TROs are responsible for:

- Administering TRICARE Managed Care Support Contracts for all eligible MHS beneficiaries in the region.
- Supporting the MTF commanders in their delivery of healthcare services for enrolled beneficiaries unable to be seen in Direct Care facilities.
- Providing customer support services when contractor actions do not result in a satisfactory beneficiary or provider issue resolution.
- Integrating MTF and non-catchment area business plans into a single, regional business plan for submission to TMA prior to the start of each fiscal year.
- Monitoring performance of the MCSC against the regional business plan.

Initially, the TROs were designed to be independent; however, over the years, there has been an increasing amount of communication and collaboration between the TROs. Currently, the TROs hold weekly informal calls to discuss common issues. Each of the TROs also participates in the MHS Clinical Quality Forum monthly meeting with TMA and the Services. Quality management of the Purchased Care health plan, including credentialing, patient safety, and risk management, is delegated to the MCSC with the TROs providing oversight. A representative from the TRO sits on all MCSC clinical, quality, and corporate committees as non-voting member. At these meetings the TRO representative is able to discuss pertinent issues, solve problems, and make recommendations to the MCSCs. Historically, there were a number of audit procedures in place to monitor the MCSCs, but now that the MCSC is performance-based, the intensity of ongoing audits has decreased. The TROs and the MCSCs can now concentrate on high level quality activities.

**Figure 2.7: Overview of TRICARE Regional Offices and their relationship to the Managed Care Support Contractors. TRICARE Area Offices handle TRICARE coordination outside the United States and report directly to TRICARE.**



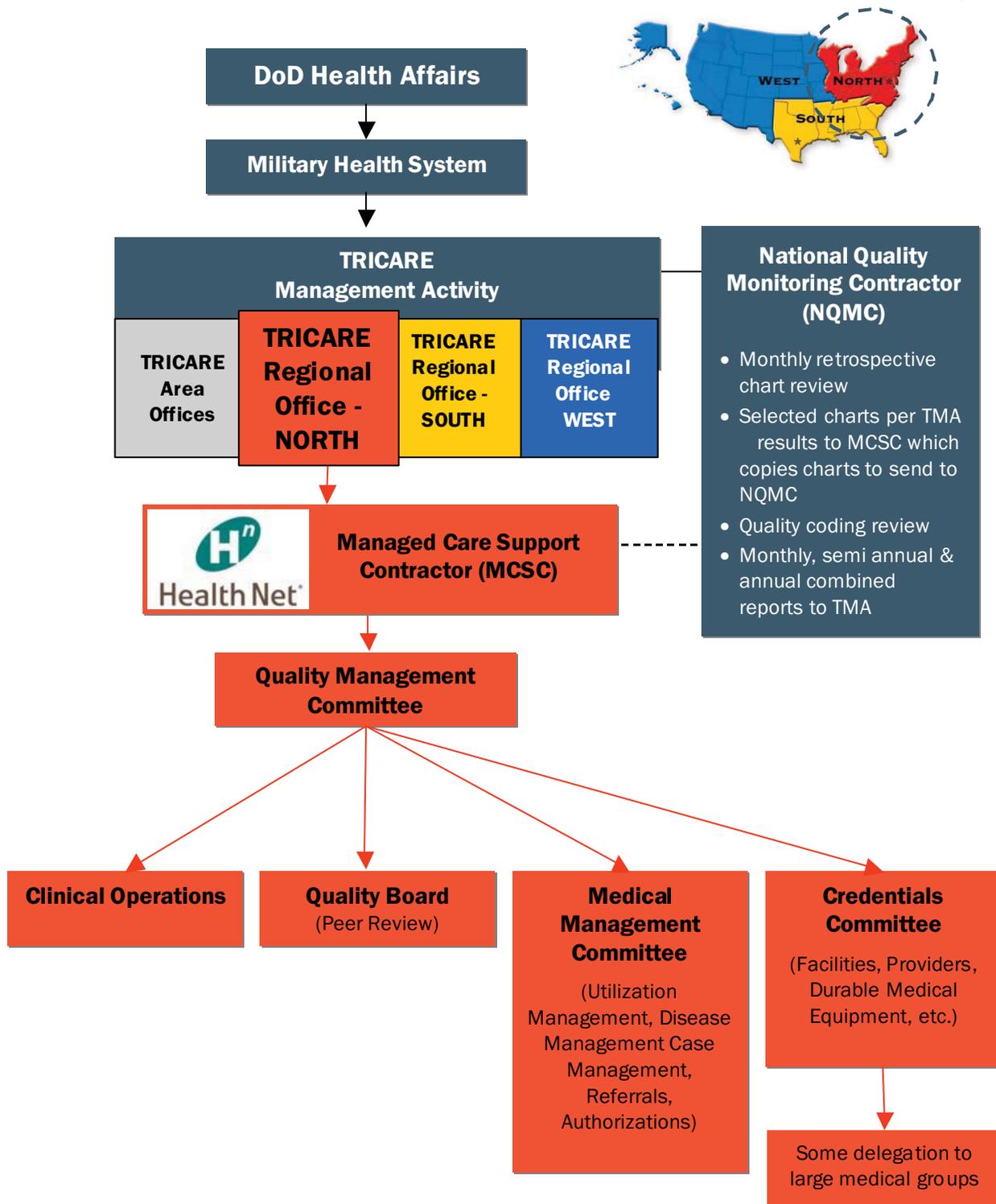
## **Managed Care Support Contractors**

The three MCSCs provide coverage of the health plan in three geographic regions, as described earlier. Health Net is the Managed Care Support Contractor in the North, Humana in the South, and Tri-West in the West. Each MCSC has a Medical Director responsible for clinical oversight, and a Quality Manager responsible for managing the quality system for their program. Figures 2.8, 2.9, and 2.10 show the differences in the MCSCs' reporting mechanisms in relation to each of the TROs.

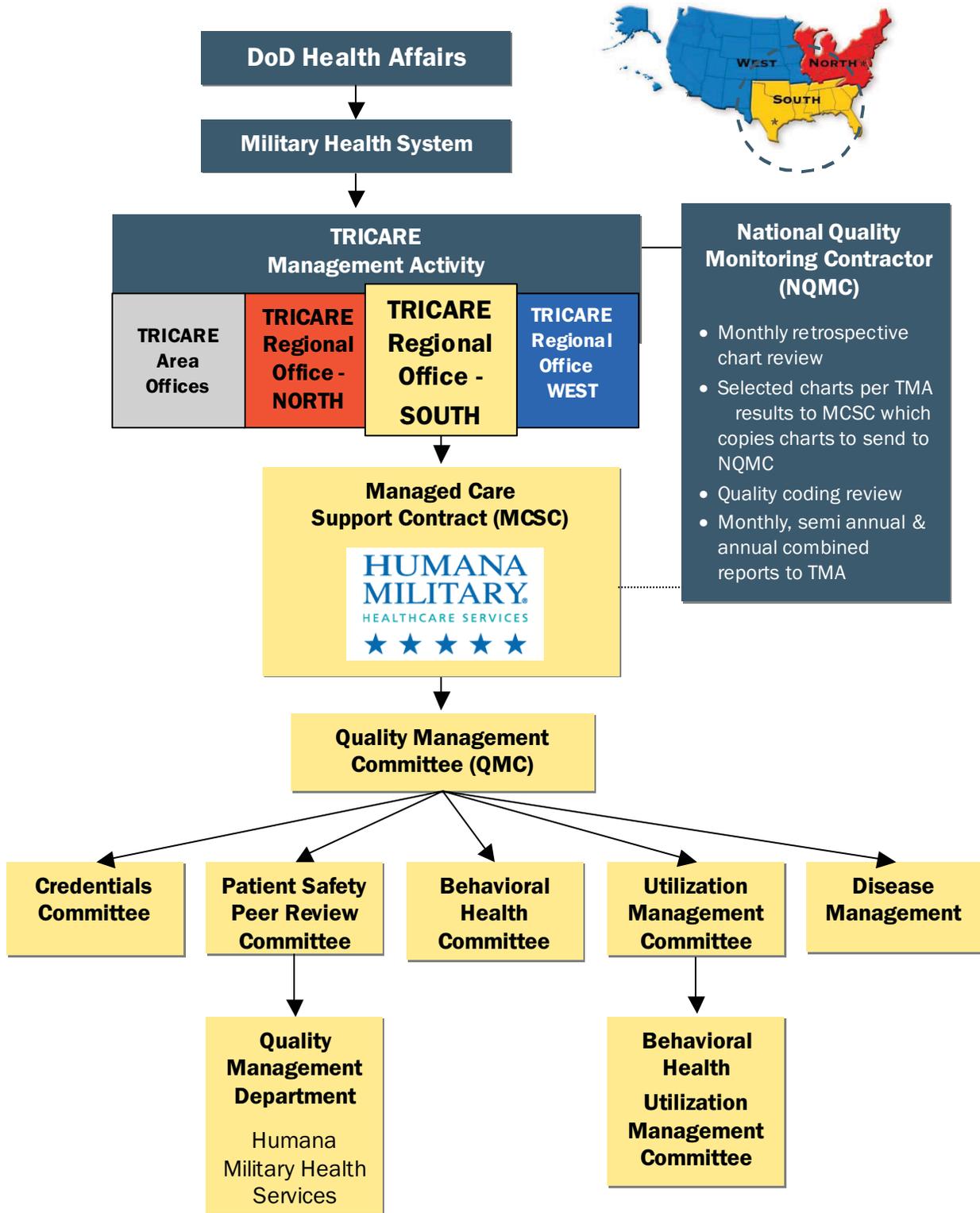
The MCSCs also have staff co-located at the MTFs to provide coordination with Direct Care personnel for beneficiaries who need services from the Purchased Care network. The customer service representatives at the MTF level meet regularly with TRICARE Operations staff within the MTFs to ensure that patients can receive network services in a timely fashion.

The MCSCs, while similar, provide for individually developed incentives and enhancement that differ with each contractor. Additionally, although each MCSC has a distinct quality structure, reporting requirements to the TRO are similar. The MCSCs are eligible for an award fee for process improvement and other quality work exceeding contract requirements. Approximately two to five percent of their contract payment goes into an award fund. An award board meets to review and bestow the recommended award.

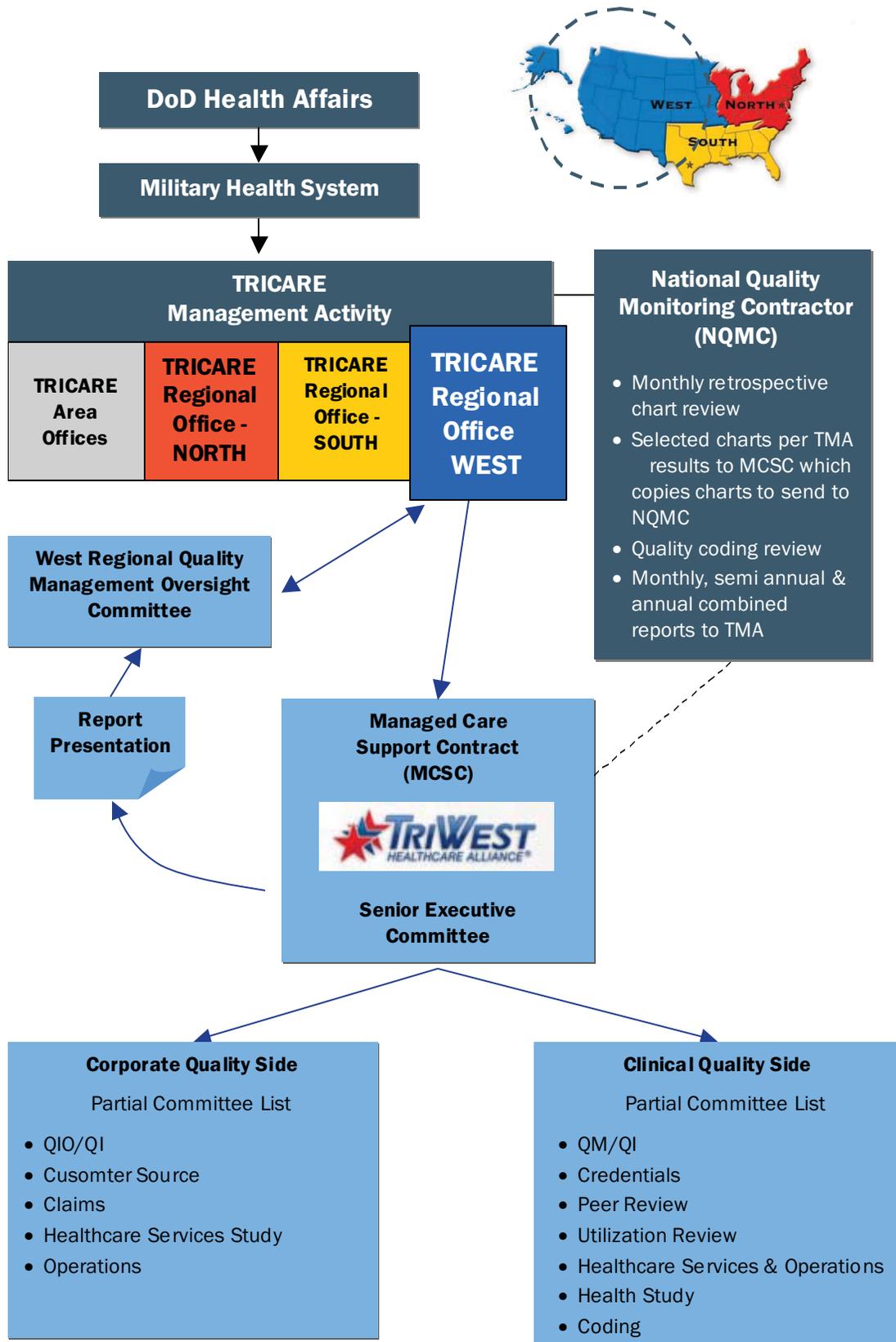
**Figure 2.8: Overview of Purchased Care Quality Management - NORTH**



**Figure 2.9: Overview of Purchased Care Quality Management - SOUTH**



**Figure 2.10: Overview of Purchased Care Quality Management - WEST**



## **Designated Providers**

Since 1982, the DoD has had a special relationship with several former U.S. Public Health Service facilities. Initially, they were given a statutory deemed status as military healthcare facilities. In 1997, Congress mandated that they become a permanent part of the Military Health System, to administer a program that became known as the US Family Health Plan. Over the years, these facilities have been acquired by not-for-profit corporate entities and provide the TRICARE Prime benefit to over 100,000 military beneficiaries today. The US Family Health Plan is a Department of Defense-sponsored health plan, made available by nonprofit healthcare providers in six service areas across the country. It offers the TRICARE Prime benefit to active duty family members, including activated Guard and Reserve family members, and retirees and their family members, including those 65 and older. The US Family Health Plan is a fully at risk managed care program that receives payment from DoD on a capitated basis. Each of the six Designated Providers has a commercial items contract with the Government.

The six not-for-profit healthcare organizations administering the US Family Health Plan include:

- St. Vincent's Catholic Medical Centers New York covering New York City, Long Island, Southern Connecticut and New Jersey
- CHRISTUS Health covering southeastern Texas and western Louisiana
- Johns Hopkins covering Maryland and parts of adjoining states
- Pacific Medical Centers covering the Puget Sound area of Washington State
- Martin's Point Health Care covering Maine, New Hampshire, Vermont and Northeastern New York
- Brighton Marine Health Care covering Massachusetts and Rhode Island

The Designated Providers are contractually required to meet the requirements of the National Quality Management Program. In addition, the Designated Provider Program Office conducts Annual Quality Site Visits for each Designated Provider, and provides a report to the Deputy Director, TRICARE Management Activity with an evaluation of the quality programs in place at each site. The Designated Providers have over 40 disease and care management programs and have maintained consistently high levels of patient satisfaction as measured by their annual satisfaction survey.

## **National Quality Management Program**

The National Quality Management Program (NQMP) is managed by the Office of the Chief Medical Officer with the support of a contractor. The program encompasses a wide range of quality management activities. The contractor is primarily responsible for gathering data to assess the quality of care in the MTFs, including chart abstraction to collect ORYX<sup>®</sup> hospital data, which is sent to The Joint Commission to meet accreditation requirements. In addition, the NQMP support contractor conducts special studies as directed by the Scientific Advisory Panel and the MHS Clinical Quality Forum. Lastly, they provide education and consultative assistance to MTFs on how to use collected data for performance improvement. The NQMP activities are reported to Senior Leadership through the MHS CQF.

## **National Quality Monitoring Contractor**

The National Quality Monitoring Contractor (NQMC) provides support to NQMP and is responsible for providing an impartial evaluation of the care delivered to MHS beneficiaries through Purchased Care. The NQMC completes evidence-based, peer-defensible reviews, and then incorporates data from these independent reviews into its ongoing reports. The process involves ongoing chart abstraction of five percent of the charts per month for each MCSC and each DP. These charts are reviewed for a

series of quality issues including inappropriate coding, standard of care, and utilization of services. According to its Web site, the NQMC is responsible for the following ongoing tasks:

- Retrospective chart review for quality of care
- External reviews from TMA appeals, hearings, and claims collections division
- Medical necessity (reconsideration) appeals
- MTF standard-of-care peer reviews for paid claims
- Mental health facility certifications
- Focused studies
- Technology assessments

The NQMC provides monthly, quarterly, and semiannual reports to TMA on its findings for both the MCSCs and the DPs.

## **Summary**

The MHS is comprised of a complex system of military and civilian healthcare facilities and providers delivering healthcare services to millions of Active Duty, Guard and Reserve, retirees, and their eligible family members. Their mission is to provide optimal health services in support of America's military mission.

The MHS encompasses the Army, Navy, and Air Force medical forces along with an extensive network of civilian hospitals and healthcare personnel, both in the continental United States and in host nations overseas. TRICARE Management Activity is the oversight agency ensuring that these systems deliver the highest practicable quality standards in evidence-based care.

## Chapter 3: Methods

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### Congressional Areas of Interest

The Congressional language for this Project task was to:

- Examine and compare the methods employed by the Department of Defense (DoD) to monitor medical quality and services
- Assess transparency and public reporting mechanisms
- Describe the degree to which DoD addresses medical errors and accountability
- Evaluate to what degree DoD collaborates externally with national quality initiatives
- Compare DoD's Medical Quality Improvement Program with other public and private organization

To understand the DoD healthcare system from the perspective of the various levels of the Military Health System (MHS), the Project Team reviewed written materials and conducted semi-structured interviews with TRICARE Management Activity (TMA) program managers, Service leads, TRICARE Regional Offices (TROs), Managed Care Support Contractors (MCSCs), Designated Providers, and the contracted agencies that play a role in quality management and oversight for both Direct Care and Purchased Care.

To evaluate DoD oversight of the Direct Care component of the MHS, the Project Team conducted 589 interviews (240 Army, 118 Navy, 231 Air Force) in 54 Army, Navy, and Air Force military treatment facilities (MTFs) across the United States and in Germany. Additionally, an online survey was administered to 394 clinical and quality department managers and staff (76 Army, 85 Navy, 233 Air Force) from facilities not included in the site visits.

### Data Collection and Analysis

#### Enterprise and Command Level Interviews for Direct and Purchased Care

Semi-structured interviews were used to gain an understanding of each of the quality programs from the leadership perspective. The interviews supplied information about structure and processes at the TMA and Service levels, and about the expected performance of the regional managers and MTFs they manage. Interviews with the TROs provided the Project Team with an understanding of how quality was monitored internally and how coordination with Direct Care providers occurred.

The specific interviews were determined based on the TMA quality management structure as represented in the Clinical Quality Forum committee charters (See Appendix B). At least one leader was interviewed from each of the separate organizations. Table 3.1 lists the departments that were interviewed. All interviews were telephonic, with the exception of the three TROs, Health Program Analysis and Evaluation, and Patient Safety Program Office and sub-offices located in the Washington, DC area. All Interviews were conducted by teams, with one individual as the primary interviewer and at least one other as the primary recorder. Interview questions were sent to interviewees approximately a week in advance, so that the interviewee could be prepared for the interview. After the interview, all notes were consolidated, agreed upon by both the interviewer and the recorder, and coded for analysis. In case of disagreement, the topic was sent back to the interviewee for clarification.

**Table 3.1: List of the departments and programs interviewed for this Review**

			Non-TMA
<ul style="list-style-type: none"> <li>- Deputy Assistant Secretary of Defense (Health Affairs)</li> <li>- Director of Clinical Quality</li> <li>- Acting Chief Medical Officer</li> <li>- Program Analyst Clinical Quality Division - Direct Care</li> <li>- Program Manager, Clinical Quality for Purchased Care</li> <li>- Clinical and Program Policy Manager</li> <li>- Program Manager, NQMP Contract</li> <li>- National Quality Monitoring Contractor Contract Manager</li> <li>- Deputy Chief, Population Health Support Division</li> <li>- Deputy Chair, Dept of Legal Medicine, AFIP</li> <li>- Health Plans Analysis and Evaluation</li> <li>- Chief Information Office Program Manager</li> <li>- Program Director, Dental Operations</li> <li>- Deputy Director, Dental Operations</li> <li>- Director, Patient Safety Center</li> <li>- Deputy Director, Patient Safety Center</li> <li>- Director, Health Care Team Coordination Program</li> <li>- Director, Center for Education and Research in Patient Safety</li> </ul>	<ul style="list-style-type: none"> <li>- Deputy Surgeon General of the Army</li> <li>- Deputy Surgeon General of the Navy</li> <li>- Deputy Surgeon General of the Air Force</li> <li>- Chief, Clinical Quality Management Division, MEDCOM</li> <li>- Clinical Quality Specialist, BUMED</li> <li>- Chief, Clinical Quality Division, AFMOA</li> <li>- Risk Manager, BUMED</li> <li>- Chief of Quality, DENCOM</li> <li>- Risk Management, AFMOA</li> <li>- Clinical Program Analyst</li> <li>- Director, Army Patient Safety Program</li> <li>- Director, Navy Patient Safety Program</li> <li>- Director, Air Force Patient Safety Program</li> </ul>	<ul style="list-style-type: none"> <li>- Medical Director, TRICARE Regional Office North</li> <li>- Medical Director, TRICARE Regional Office South</li> <li>- Medical Director, TRICARE Regional Office West</li> <li>- Quality Manager, TRICARE Regional Office North</li> <li>- Quality Manager, TRICARE Regional Office South</li> <li>- Quality Manager, TRICARE Regional Office West</li> <li>- Executive Director, US Family Health Plan Alliance</li> <li>- Senior Medical Director, Tri-West</li> <li>- Quality Manager, Tri-West</li> <li>- Senior Medical Director, Humana</li> <li>- Quality Manager, Humana</li> <li>- Senior Medical Director, Health Net</li> <li>- Quality Manager, Health Net</li> <li>- Chief Quality, PACMED, US Family Health Plan</li> <li>- Chief, Care Coordination Team, PACMED, USFHP</li> <li>- Medical Director, US Family Health Plan at Brighton Marine Health Center</li> <li>- Chief of Quality, US Family health Plan at Brighton Marine Health Center</li> </ul>	<ul style="list-style-type: none"> <li>- Patient Safety Director, US TRANSCOM, Scott AFB</li> <li>- Chief Medical Officer, Air Evacuation, Scott AFB</li> <li>- Patient Safety Director, Air Force Air Mobility Command, Scott AFB</li> <li>- NCA LNO, Washington DC</li> <li>- US CENTCOM Deputy Surgeon</li> <li>- Director, Joint Theater Trauma, CENTCOM</li> <li>- Command Joint Theater Surgeon - Iraq</li> <li>- Command Joint Theater Surgeon, 101<sup>st</sup> Airborne Division - Afghanistan</li> <li>- Commander, DCSS TF Med, Afghanistan Theater</li> <li>- Commander, Chief Nurse, DCCS, DCSS</li> <li>- TF 62<sup>nd</sup>, Iraq Theater</li> <li>- ARCENT Surgeon</li> <li>- US CENTCOM</li> <li>- Senior Policy Analyst for Patient Safety, RAND Corporation</li> </ul>

**Direct Care – Medical Treatment Facility Site Visits**

Site visits were selected based on specified geographic regions that had a reasonable distribution of medical and dental facilities from all Services and representatives from the TROs. The sites were

clustered in four geographic areas representing the northern, southern and western regions in the United States and overseas. After a review of the type and size of the facilities, the number of sites was expanded to include more community-level hospitals and freestanding clinics. This adjustment prevented obtaining a skewed view of the MHS quality program due to a focus on large facilities and training sites.

The initial plan was to visit five percent of the hospitals and medical and dental clinics for each of the Services. Due to a variety of constraints, including Base Realignment and Closures (BRAC), competing requirements on the MTFs, and inability to reschedule visits, there was some attrition from the initial plan. The Project Team conducted visits at 14 hospitals and 40 branch or freestanding medical and dental clinics. Due to the number and wide dispersion of the dental clinics, staff was unable to obtain a representative sample. The Project Team visited sites in the three regions and overseas, with representation from each Service in each region.

Once the visit list was finalized, the Service quality management leads provided a point of contact for each of the sites. Subsequently, the Project Director coordinated directly with the sites for the visits.

The purpose of the site visits was to obtain information from leaders and Direct Care providers at the MTF-level on how the quality management and patient safety programs were actually conducted. For this reason, the Project Team interviewed the quality management department, the patient safety department, and personnel in high-risk areas such as the emergency department, operating room and post-anesthesia recovery, labor and delivery, obstetrics, intensive care units, and mental health departments at each site where those departments existed. Additional interviews were conducted based on the mission of the MTF and to obtain a broad distribution of all types of clinical units and services.

The site visit process started with an “in brief” of the purpose of the visit for the commander and staff, followed by an interview with the quality department. At each site, the interviews were scheduled to obtain an even distribution of senior leaders, mid-level managers, and junior Direct Care staff. The length of the site visits varied depending upon the size of the MTF: medical center visits lasted two and a half days, community hospitals were two days, and clinic visits ranged from two to six hours. Before leaving, the Project Team provided an “out brief” with an overview of key findings for the commander and staff.

For its site visit interviews, the Project Team developed a semi-structured interview tool focusing on the conceptual model and the Congressional areas of interest articulated in the tasks. Content was derived from DoD and Service regulations, standard quality programmatic domains, and patient safety standards and processes. The tool was adapted to be relevant to specific departments or programs, but focused on key domains of interest. The Quality Management Program (QMP) interviews were used to understand the intent of QMP leadership at the MTF level. The medical staff interviews provided information on how the quality management plan was carried out in the MTFs.

Site visit interviews took place between February 24, 2008 and June 5, 2008. During site visits, interviewers used and wrote notes on the semi-structured interview tool. The tool applied the Donabedian framework<sup>7</sup> of process, structure, and outcomes to Congressional areas of interest: Quality Management, infection control, deployment, external collaboration with national quality programs, comparison data (interdepartmental, across services, non-military, commercial/private), research/special studies, transparency, information systems, patient safety, credentialing, privileging, cultural competency, QA/PI oversight, and risk management. The Project Team conducted two training sessions on coding. Groups of two or three team members reviewed the

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<sup>7</sup> Donabedian, Avedis. *An introduction to quality assurance in health care*. Oxford: The American University of Armenia Corporation, Oxford University Press, Inc., 2003

coded data to identify themes. The occurrence of specified themes were tabulated according to the Donabedian model. These themes were then organized according to the model. All data were aggregated first by Service, and then to overall MHS Direct Care level.

Interview narratives were analyzed using qualitative analysis methods. Qualitative analysis is an active and interactive process in which, typically, the narratives are carefully scrutinized using structured processes before the data is organized in the form of findings. The goal of qualitative analysis is to organize and provide a systematic structure of the experiences shared by participants, to elicit meaning from the experiences shared by participants, and to understand the cognitive and subjective perspectives of the person who has the experience. There are four common styles in analyzing narrative data: content analysis, template analysis, categorization schemes, and reflection of the text<sup>8</sup>.

Context analysis was used for this report. This approach, also known as the quasi-statistical analysis style, consists of techniques for reducing narratives to a unit-by-variable matrix, and analyzing the matrix quantitatively to answer the research questions or test hypothesis<sup>9</sup>. The content analysis approach was more appropriate for this report in organizing and managing the masses of narrative data gathered through semi-structured interviews.

### **Direct Care Military Treatment Facility Online Survey**

To gather information from a broader range of facilities, an online survey was administered to quality managers, patient safety managers, risk managers, credentialing managers and clinical leaders of the MTFs that did not receive a site visit.

Survey questions covered several topics, including role and experience, resources, transparency, communication, cultural competency, perception, and additional role-specific issues. The survey questions were developed by a multidisciplinary project team, and reviewed by clinical and military personnel for content validity. However, due to the project's time constraints, pilot testing was not feasible. The survey modules were administered by using an online format. The online survey received approval through the military Institutional Review Board for Human Subjects (CDO Number CDO-08-2019), Defense Manpower Data Center (#08-0034), Information Management Control Officer, and the Privacy Act Office, and was assigned a Report Control Symbol (RCS) of DD-HA (AR) 2325 from Washington Headquarters Services.

The online survey began June 17, 2008 and remained active until July 7, 2008. Survey dissemination was accomplished by providing an e-mail message with detailed instructions to each of the Service leads who distributed the survey. The Navy and Air Force Service leads distributed the survey requests directly to the individuals who were to complete the survey. The Army distributed the request to a single contact at each MTF, who then forwarded the request to the appropriate individuals at each facility. All survey respondents were directed to a secure Web page. At this Web page, respondents were instructed to select the link most representative of their role:

1. Clinical Management
2. Quality Management
3. Patient Safety
4. Risk Management

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<sup>8</sup> Polit, D.F., Beck, C.T., & Hunglar, B.P. (2001). *Essentials for Nursing Research: Methods, Appraisal, and utilization* (5<sup>th</sup> ed.). Philadelphia: Lippincott.

<sup>9</sup> Denzin, N., & Lincoln, Y. (2000). (Eds.). *In Handbook of Qualitative Research* (2<sup>nd</sup> ed.). Thousand Oaks: Sage.

5. Credentialing
6. Combined Patient Safety/Risk Management

Individuals with multiple roles were instructed to select their primary role.

The number of survey respondents was tracked by role and Service branch on a daily basis. After approximately one week, the Service leads sent reminder notices to complete the survey.

After the survey was closed, data was downloaded from the Web site. Following data cleaning, standard descriptive statistics (frequency counts, means, medians, standard deviations, and ranges) were applied to categorical and numerical questions. All programming and data analysis were executed in SAS 9.1.

Analysis was performed both at the Service level for the Air Force, Army, and Navy and then aggregated for all Services. To calculate this aggregate, each response was given a weight proportional to the inverse of the number of surveys received from each service to that role. No analysis took place at the site or individual levels. The aggregate was weighted to adjust for variations in response rates for the Services. Because of the small numbers involved, only the “All Services” aggregate is reported. Individual modules were a combination of questions applicable to multiple roles and questions that were only applicable to a specific role. Questions applicable to multiple roles were analyzed separately by role as well as in aggregate.

Due to the way the survey was distributed and Service differences, it is not useful to report a specific response rate. For the Navy, 85 of 90 (94 percent) individuals responded to the survey, compared to 233 of 276 (84 percent) from the Air Force. The Army was not able to report the number of individuals who were asked to complete the survey. The surveys were targeted to five different roles, but individuals at many MTFs fill multiple roles. These individuals were only asked to complete one survey. Table 3.2 shows the number of surveys received by service and role.

**Table 3.2: Number of respondents to the online survey by Service**

				Total
				76
Quality Manager	26	23	49	98
				83
Patient Safety Manager	15	16	38	69
				36
Patient Safety/Risk Management Dual Role	3	6	23	32
				<b>394</b>

### Evaluation Framework

The Project Team developed a model based on an extensive review of current best practices for quality improvement and clinical care. The team examined several nationally recognized models of care, such as Kaiser Permanente and Sentara Health Systems, to determine the major domains that constitute best quality practices. The team also reviewed the criteria for the Baldrige Health Care Criteria for Performance Excellence Award, and programmatic elements from the ISO Quality Management Principles, the Institute for Healthcare Improvement, the Donabedian Quality Model, Clinical Microsystems, and Lean Six Sigma to derive a model that encompassed a comprehensive set of characteristics germane to high performing healthcare organizations.

The key domains used in this evaluation, along with the elements examined in the military healthcare quality management system within each, are:

- Leadership – Organizational culture of quality and patient safety, organizational support credentialing and privileging, quality assurance, and performance improvement oversight
- Resources – Personnel and staffing, information technology systems (electronic medical records, electronic credentialing, other databases), financial resources
- Evidence-based Process Design – Chronic disease management, research, special studies, new interventions, participation in national quality improvement programs
- Communication and Coordination – Committee structure, horizontal and vertical communication structures and processes, reporting mechanisms, coordinating opportunities with other organizations
- Patient- and Family-Centered Care – Patient satisfaction surveys, culturally and linguistically appropriate care, family and community support systems
- Collaboration – Internal collaboration mechanisms (interdepartmental, inter-Service) and external collaboration mechanisms (local, regional, national collaborations), participation in national quality improvement programs
- Performance – Outcomes monitoring, ORYX<sup>®</sup> hospital measures, health plan measures, quality improvement tracking and trending, standards and regulations
- Transparency and Public Reporting – Data sharing for best practices, Population Health Portal, MTF Web sites
- Patient Safety – Evidence of patient safety program, reporting of sentinel events and near misses, TeamSTEPPS<sup>™</sup>, medication reconciliation, national patient safety goals

### **Comparison groups**

To compare the MHS with other public and private healthcare organizations, it was necessary to understand the major differences in Direct and Purchased Care. Direct care is an integrated system with healthcare managed in a closed system of health plan-owned hospitals and medical and nursing staff. Similar public systems include the Veterans Health Administration (VHA) and some public universities. The Project Team selected the VHA and the University of California healthcare systems as public comparisons. Private sector comparisons included integrated systems recognized as high performers, such as Sharp Health Care System (2007 Baldrige Award winner), Sentara Health Care, InterMountain Health Care, and Kaiser Permanente. Two high performing health plans, United Healthcare and HealthPlan of Minnesota, were used for Purchased Care comparisons.

### **Limitations**

The data presented has several limitations. Interview findings in this report are self-reported data, the validity of which is dependent upon the degree of objectivity of each interviewee. To improve validity, a large number of different types of staff members from many different MTFs were interviewed. Results from the online surveys are based on small numbers of respondents.

In Purchased Care, unlike Direct Care, DoD does not have visibility down to the individual facility/provider level. For this reason, our assessment was limited to the evaluation of information provided by the TROs and MCSCs.

# Chapter 4: Assessing Quality Management

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## Introduction

This section presents the major findings and recommendations from the external assessment of the Department of Defense (DoD) methods to monitor quality, and how DoD incorporates its measures into its quality program. The findings of the Quality Management Program (QMP) specifically relate to the domains of leadership, resources, evidence-based process design, patient- and family-centered care, and communication and coordination. Subsequent chapters address areas that are either managed separately in Direct Care: Patient Safety (Chapter 5) and Credentialing, Privileging, Peer Review, and Risk Management (Chapter 6), or that were the subject of special Congressional request: Collaboration, Transparency and Public Reporting (Chapters 6, 7, and 8).

## Direct Care

The Direct Care system is comprised of medical centers, community hospitals, and medical and dental clinics operated by the Army, Navy and Air Force. The Service branches have direct control and oversight of the operation of these facilities, but work together and with other DoD entities as described in Chapter 2 to provide oversight, guidance, processes and tools for Direct Care Military Treatment Facilities (MTFs).

## Leadership

Good leadership maintains constancy of purpose, establishes clear goals and expectations, fosters a positive culture, advocates for the small groups within the larger organization, and provides timely responses to issues and problems. For this project, good leadership was defined as follows:

- Conveying a strong culture of quality by allowing shortfalls, problems, and errors to be shared openly without the risk of blame or guilt.
- Providing policies and procedures that communicate the requirements of the program, including structures, processes, and expected outcomes, as well as operational definitions applicable to all members of the system.
- Articulating standards of practice to include requirements for accreditation, credentialing, and privileging standards and processes for the MTFs and healthcare professionals.
- Establishing mechanisms for ongoing communication of issues and problems throughout the Military Health System (MHS).
- Instituting a systematic approach to evaluating quality of care internally in accordance with best practices, and including domains such as those found in the Institute of Medicine (IOM) quality paradigm – effectiveness, efficiency, equitability, patient-centeredness, safety, and timeliness.
- Executing sufficient quality oversight to ensure the highest levels of practicable quality of care.

During site visits, the Project Team observed that all quality management departments were working to ensure they were compliant with The Joint Commission's requirements and following the regulations and instructions provided by DoD and their Service Commands. In all cases observed, the MTFs were fully accredited by the appropriate accrediting bodies.

Credentialing in the military is multifaceted; however, leadership is ultimately responsible for ensuring that all clinicians are appropriately credentialed and privileged prior to taking care of

patients. Commanders are responsible for providing oversight to this process. During site visits, the support provided to the credentialing group was impressive. Commanders of visited MTFs took this task seriously, providing unequivocal guidance that clinicians could not independently care for patients prior to completing the credentialing and privileging process. The majority of the findings on credentialing are reported in Chapter 6 along with Risk Management.

Research conducted provided ample evidence that the Service Medical Commands had influence on the MTFs. Several facilities mentioned receiving Service-level guidance through monthly video teleconferences and frequent e-mail correspondence. These activities were viewed as positive command influence. However, staff reported frustration at Service level commands for failing to provide clear-cut guidance and direction on issues they perceived as crossing over all MTFs, such as medication reconciliation. Additionally, some staff felt that Service-level commanders were focused on productivity versus quality oversight, leaving little time available for quality improvement activities.

Base Realignment and Closure (BRAC) has been problematic in some areas. BRAC has been a long-standing initiative of the military to better manage aligning patient care assets with patient care needs. In interviews of numerous staff in multiple MTFs, it was apparent that, at the MTF level, many individual staff members were confused about the priorities of the BRAC initiatives and were not sure who was in charge of the local realignment efforts. Even at the MTF command level, there did not seem to be clear guidance on BRAC, other than goal-level statements such as, “we will be combining the inpatient services at one facility” or “we will be expanding our capacity.”

When BRAC activities combined Services, even more confusion ensued. While not directly related to quality oversight, combining and realigning facilities does affect quality programs. One situation, for example, involved two hospitals with very disparate quality programs – one highly centralized and the other decentralized. Both programs offered many positive quality initiatives, but had made little headway on how they were going to combine their programs. The DoD needs to provide for a lead agent in charge of moving the BRAC regional or local activities forward, ensuring that there is clear intent as to which Service or Service regulations will prevail in any one area or MTF. It is recommended that DoD utilize optimal practices from each of the facilities involved to implement a new program at a consolidated facility. The MHS has a clear opportunity to leverage the positive aspects of the BRAC activities as it moves towards a more unified medical Service.

Evidence of command influence was observed in all MTFs. Staff was aware of, and following, the priorities of the commanders. Leadership is not just the responsibility of the commander, but of the entire command staff. MTFs have multiple layers of leaders depending on the size of the facility. While the positions vary slightly between the Services, the levels of leaders within the organization were similar. At the command level reside the commander and deputy commanders. The next level of leadership is the senior leaders in charge of a group of similar departments, followed by department leaders. The lowest level of leadership is at the unit or section level. Much like in the civilian healthcare system, the military cultivates leaders through a series of experiences, each with increasing levels of responsibilities.

One major way in which the military differs from the civilian healthcare system is the general requirement for active duty permanent change in station (PCS) every two to three years. PCS establishes a culture of prescribed turnover that has become a way of life for all military personnel. While the military has reasons for this policy, it is not without problems. The frequent turnover of commanders, deputy commanders, and other senior leaders, particularly when they occur simultaneously, can create a leadership void during which the system is more vulnerable to problems.

Stability of leadership helps to foster a culture of quality and patient safety as well. This was most evident in MTFs that had an open culture, where staff felt comfortable in reporting problems and issues to senior MTF leaders. Site visit results were confirmed by the online survey, with 75 percent of respondents either agreeing or strongly agreeing that their facility had a strong culture of patient safety and quality.

The military has done a good job of trying to instill a culture of safety and quality at the MTF level. There were a few facilities where staff still felt the culture was one of blame and did not feel comfortable reporting events for fear of retribution. Additionally, a very small number of respondents to the online survey disagreed that there was a positive culture where untoward events could be reported openly.

## **Resources**

Adequate resourcing is a major domain in a quality organization. Resourcing is a challenging area across US healthcare in general, and it is no less challenging in the military. The Project Team asked questions on a number of resource areas, but discussion in this report will be limited to the top three areas identified: staffing, health information technology, and education and training.

### **Staffing Resources**

A skilled and experienced staff is essential to high performing organizations. The Project Team conducted site visits to all Services and interviewed a wide variety of staff, including senior and mid-level managers, as well as Direct Care staff.

Table 4.1 shows selected characteristics of personnel who responded to the online survey by the role they occupy in the MTFs. The majority of the quality, patient safety, risk management, and credentialing managers who participated in the online survey were either government civilians or contractors. In contrast, all of the clinical staff who responded were military. The quality and clinical managers reported themselves as high-level managers to a greater extent than the other categories of quality managers when asked about their functional level. The quality department managers had levels of experience similar to those in the site visit interviews, with most reporting greater than one year of experience, and many greater than five years of experience. The majority of the respondents indicated they were trained in their respective responsibilities. As with site visit staff, most survey respondents rated themselves as competent.

Selected characteristics of the interviewed staff are also presented in Table 4.1. Just over 75 percent of interviewed personnel were active duty, while most of the others were government civilians and 94 percent held permanent (as opposed to temporary) positions. Of the military personnel interviewed, the majority were officers. Almost half of the respondents functioned as mid-level managers, with approximately 40 percent in their specific job for less than one year. Among those employees with less than one year of job experience, an average of 89 percent of respondents were active duty personnel. About 80 percent had some type of quality improvement training, and almost all rated themselves as competent in performing their duties.

**Table 4.1: Characteristics of respondents to online survey and site visit interviews**

	Online Survey Respondents <sup>1,2</sup>					
Active	26.1%	8.8%	16%	3.8%	100%	75.3%
AGR/FTS/AR	1.5%	0.0%	0.0%	0.0%	0.0%	0.7%
Civilian (GS)	70.4%	57.8%	74.5%	90.2%	0.0%	21.8%
Contracted staff (Global War on Terrorism)	0.0%	31.2%	2.6%	0.0%	0.0%	1.1%
Other	2.1%	2.2%	6.9%	6%	0.0%	1.0%
Officer	92.2%	87.6%	78.8%	59.8%	100%	83.0%
Enlisted	7.8%	12.4%	21.2%	40.2%	0.0%	17.0%
High-level manager	48.8%	16.4%	24.7%	7.5%	47%	27.0%
Mid-level manager	41.5%	44.8%	36.6%	30.3%	19.1%	46.1%
Direct clinical care	3.0%	1.1%	7%	0.0%	31.2%	15.5%
Other	6.7%	37.8%	31.7%	62.2%	2.7%	11.5%
Temporary (i.e., acting)	1.4%	5.7%	6.9%	5.4%	2.7%	6.1%
Permanent	98.6%	94.3%	93.1%	94.6%	97.3%	93.9%
< 1 month	4.3%	1.1%	3.4%	1.5%	2.7%	4.0%
1 month to < 6 months	8.4%	17.7%	7.2%	2.3%	15.5%	12.1%
6 months to < 1 year	18.8%	14.4%	18%	7.5%	12.6%	24.2%
1 year to < 5 years	35.1%	43.5%	47.3%	42%	68.6%	45.5%
5+ years	33.5%	23.2%	24.1%	46.6%	0.6%	14.1%
< 1 month	16.7%	39.6%	25%	32.5%	7.5%	13.5%
1 month to < 6 months	5.6%	5.5%	6.5%	6.1%	10.7%	4.3%
6 months to < 1 year	2.7%	2.3%	4.5%	11.5%	6.4%	7.6%
1 year to < 5 years	18.1%	22.9%	37.1%	16.3%	47.1%	33.9%
5+ years	56.7%	29.7%	26.9%	33.6%	28.3%	40.8%
<b>Received applicable Quality Improvement training/orientation</b>						
Yes	86.01%	91.2%	74.3%	76.6%	66.3%	79.8%
Excellent	31.8%	39%	23.5%	57.9%	11.9%	20.9%
Very Good	40.5%	27.7%	43.4%	22.8%	45.5%	46.9%
Good	27.7%	28.5%	26.3%	19.3%	37.8%	26.3%
Fair	0%	4.8%	6.8%	0%	4.8%	5.7%
Poor	0%	0%	0%	0%	0%	0.3%

<sup>1</sup> 394 total responses (76 Army, 85 Navy and 233 Air Force)

<sup>2</sup> Individual survey responses were weighted to provide an overall percentage with equal representation of each Service.

<sup>3</sup> 589 total responses (240 Army, 118 Navy, 231 Air Force)

Staffing turbulence was the number one concern of personnel interviewed during site visits. This was confirmed by the online survey (Table 4.2), reflecting the responses of the different manager roles. In general, the online survey supported the findings that many staff believed they did not have adequate staffing. This was the issue reported as the most problematic for all MTFs in all Services during the site visits and by online survey respondents.

**Table 4.2: Report of adequacy of resources from online survey by quality manager, clinical leader, credentialing and patient safety roles<sup>1, 2</sup>**

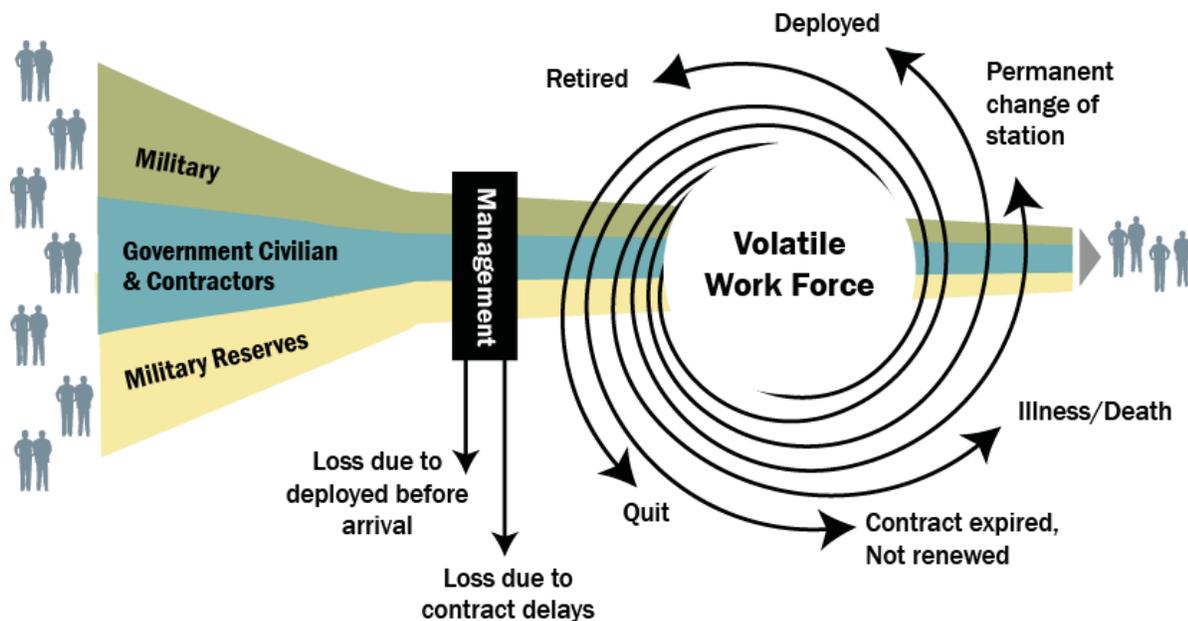
My MTF has adequate resources for quality improvement activities	Resource		
			Financial Support
Strongly agree	5.23%	12.6%	12.7%
Agree	35.8%	56.3%	44.3%
Neutral	12.1%	20.9%	25.6%
Disagree	35.2%	8.8%	15.3%
Strongly disagree	11.7%	1.4%	2.9%

<sup>1</sup> 358 total responses (64 Army, 78 Navy and 216 Air Force)

<sup>2</sup> Individual survey responses were weighted to provide an overall percentage with equal representation of each Service.

Figure 4.1 depicts the findings on staffing during the site visits. In general, Project Team personnel were told of and observed evidence of a volatile military healthcare work force, primarily due to the increased deployments of medical personnel in support of the Global War on Terrorism. According to many interviewees, the numbers of military healthcare personnel coming into the System were reported to be lower. The fact that almost all of the MTF staff members interviewed reported the same issue reinforced the validity of this concern. Specifically, it was noted that the number of graduate medical education residents was smaller than in previous years. In some cases, over 50 percent of the assigned personnel were deployed, sometimes leaving only one physician in a given department. From the perspective of the patients, deployments in general were particularly problematic because the deploying physician may not have had time to sign off on all the records or to follow through with the personal care being provided, creating difficulties for the physician who follows and for the patient who has now lost his or her primary care physician.

**Figure 4.1: Sources and turbulence of staff due to increased operational activities (OPTEMPO) in Direct Care creates a volatile and shrinking work force in MTFs tasked with providing healthcare to service members, families, and retirees, as well as providing medical staff to deploy in support of Operation Iraqi Freedom and Operation Enduring Freedom.**



“Built in” staff turnover also contributes to the turbulence, due to military personnel moves at the end of a tour of duty. The end of duty rotations, known as permanent changes of station (PCS), typically occurs during summer months to accommodate families with school-age children. While this minimizes the difficulties for the families, it increases the instability of the healthcare work force in the MTFs, particularly during this summer rotation time, magnifying the deployment issues previously discussed.

The decreased availability of the Military Reserve forces contributes to the lower number of staff available. Long a reliable source of temporary replacement staff during the summer months in particular, Reserves are less available due to their own deployments to Iraq and Afghanistan. Finally, the civilian hiring system is a long, protracted process that often causes a loss of potential staff even prior to hire because of contracting delays. This issue was confirmed at all levels of management during the site visits.

The impact of this volatile staffing to patient safety and quality management and oversight should not be underestimated. Fewer staff are available in the face of a higher demand caused by increased admissions of battle and non-battle injuries and illnesses being evacuated from the theater into the continental United States (CONUS) MTFs. There are fewer staff who can concentrate on patient safety and quality management. This ripple effect was repeatedly reported during the site visit interviews and in the open-ended comments from the online survey. Site visit interviews reported fewer staff shortages in the larger MTFs due to greater depth of staff to fill in the gaps.

## **Electronic Health Information Systems**

The MHS utilizes a wide variety of electronic information systems to provide the daily care of beneficiaries. Some of these systems are used throughout DoD, such as the Defense Enrollment Eligibility Reporting System (DEERS) used to determine beneficiary eligibility for the entire DoD. Others are unique to military healthcare, such as the MHS Management Analysis and Reporting Tool, also known as M2, a database that incorporates in a central repository data from MTFs, Managed Cared Support Contractors (MCSCs), the Defense Manpower Data System, and Pharmacy Data Transaction Service (PDTS). There are a variety of other electronic medical information systems available, some of which will be discussed throughout this section.

### **Outpatient Electronic Health Records**

AHLTA is the military’s electronic medical record-keeping system. AHLTA is based on the Composite Health Care System, a locality-based program that DoD successfully used for several years. AHLTA is connected to a clinical data repository accessible to AHLTA users worldwide. It was designed to provide the DoD with a comprehensive, patient-centered electronic record. In other words, records are organized around the patient and providers can access those records from any geographic region in the world, including the battlefields in Iraq and Afghanistan. AHLTA Mobile is used in MTFs that are located in the theater of operations. AHLTA Mobile is a software application running on a hand-held computer that is used by field medics to record patient encounter data, usually at the point of injury. Patient encounters recorded in AHLTA Mobile are transmitted to AHLTA Theatre (AHLTA-T), which transmits them in near-real time to a system in Virginia. That system distributes the AHLTA Mobile encounters to the Joint Medical Workstation (JmeWS) and the Theater Medical Data Store (TMDS), where they can be used to support medical surveillance, and to Clinical Data Repository (CDR), where they will become part of the Service members’ longitudinal health record.

AHLTA, which is being developed in stages, supports outpatient care. There are plans to expand AHLTA into specialty care areas. In fact, a few site visit locations are in the process of beta testing dental and optometry modules that are not yet widely available. Site visit results found that 100 percent of the MTFs use AHLTA for their outpatient electronic medical records system, a fact confirmed by the online

survey. While worldwide accessibility makes it a powerful tool, AHLTA comes with a major drawback – availability. Respondents reported that they frequently experience glitches and/or temporary system failures that cause errors in data capture and, most especially, extremely slow performance. This slowness and frequent down time periods have generated skepticism among end users in terms of AHLTA’s use and reliability.

Results of site visit data show that the most frequently reported barrier associated with AHLTA is its slow and cumbersome performance. Based on overall site visit observations and reported responses, it is clear that the blend of staff scarcity (in both clinical and most especially administrative positions), slow Internet connectivity at some facilities, higher patient volumes, and AHLTA’s perceived ‘unreliability’ of data capture has made clinicians, nurses, staff, and other AHLTA-users sensitive to splitting time between clinical and administrative responsibilities. This observation became apparent by the number of and extent to which end users fault AHLTA for:

1. Decreasing productivity
2. Disrupting (or taking the place of) patient care
3. Increasing the volume of work
4. Expanding the workday

AHLTA, however, may not be the only cause of these reported adversities. For example, numerous respondents report having to manually write outpatient visit data and later entering it into AHLTA to avoid data loss. Some end users complain about having to scan records to upload into AHLTA, causing frustration because of time consumption. Others report data loss, which in some cases can be attributed to a time lag between intake and the actual physician consultation. A striking number of providers characterize the incidental time used to work around AHLTA’s slowness or ‘unreliability’ as ‘time away from patient care’. Similar perceptions are shared by online survey respondents. Seventy percent of respondents believe that the wait time between (AHLTA) screen changes is poor. Over 50 percent of respondents describe AHLTA’s ability to capture clinical outcome measures as poor (see Table 4.3).

**Table 4.3: Clinical Leaders online survey results for AHLTA use**

	AHLTA Feature/Characteristic <sup>1,2</sup>				
	Extracting data for Quality Management/Quality Improvement purposes				Interface with other systems
Excellent	1.1%	0.6%	0%	0%	0%
Very Good	9.1%	10.2%	0.6%	4.8%	1.1%
Good	13.7%	19%	10.5%	10.5%	3.4%
Fair	53.4%	44.5%	19%	31.6%	9.9%
Poor	22.7%	22.5%	70%	52.6%	85%
N/A	0%	3.1%	0%	0.6%	0.6%
				Applicability to specialty services	
Excellent	1.1%	0%	0.6%	0%	
Very Good	17.7%	0%	4.6%	1.1%	
Good	29.9%	11%	29.7%	19.1%	
Fair	35%	28.5%	30%	29.4%	
Poor	15.1%	60.5%	32.1%	38.5%	
N/A	1.1%	0%	3.2%	11.9%	

<sup>1</sup> 76 total responses (4 Army, 11 Navy and 61 Air Force)

<sup>2</sup> Individual survey responses were weighted to provide an overall percentage with equal representation of each Service.

There were also some positive reports on the use of AHLTA during the site visits. Almost all providers interviewed agreed that AHLTA allowed them to view patient records in a way that was never before available, for example from geographically remote MTFs for the purpose of preparing for an admission or providing a consultation. A positive comment often heard was that AHLTA allowed interoperability between all three Services. Better-trained and more experienced users have figured out how to maneuver around the system to enable them to perform some rudimentary data mining. Other advanced users are able to design database searches for ad hoc reports on symptoms/sign clusters. Few AHLTA champions are able to assist local users to adopt these features. The combination of Service-led AHLTA training initiatives, AHLTA user conferences, and efforts led by AHLTA champions help enhance the experience for the AHLTA end-user.

Half of online survey respondents believed that the validity of AHLTA information was good to excellent. A third of respondents characterized AHLTA physician order entries as good to excellent. More proficient AHLTA users were better able to find strengths in the system while novice users either struggle with the complexity of the system or remained unaware of capabilities such as generation of ad hoc reports, using Automated Input Methodology (AIM) forms, shortcuts, and coding capability, to name a few. The DoD needs to increase the number of AHLTA champions and super users, as well as increase education and training specifically on how to access online help and submit trouble tickets.

TMA is in the process of addressing many of these AHLTA concerns. For instance, an upgrade will occur in fiscal year 2009, designed to improve availability of AHLTA. There are also plans to improve AHLTA's Document Management System next year to facilitate uploading of PDF format data. TMA is in the process of evaluating architectural alternatives to improve AHLTA performance. The MHS plans to work with the Services to improve provider efficiency, by offering extensive training. Some of the training efforts will focus on use of "shortcuts", minimal use of structured text, and use of AIM forms.

### **Inpatient Records**

In terms of inpatient records, the MHS is using a system called Essentris, a windows upgrade of Clinical Information System (CIS). A limited number of MTFs have access at this time. Essentris provides clinical charting, computerized provider order entry, electronic medication administration record, results reporting, and decision support tools that can be used in all inpatient settings. Because the Essentris program has not been deployed to all MTFs, some MTFs are still using inpatient paper charts. Variability regarding the presence of an inpatient electronic medical record created problems for staff and patients who rotate between more than one military facility. This became evident in areas where multiple MTFs are concentrated in a single geographic region. The biggest complaint reported during site visits about inpatient electronic medical records was that some facilities did not have such a system in place.

Respondents from MTFs that use Essentris were frustrated over the lack of interface with Composite Health Care System, requiring duplicate charting for ordering labs and blood products. There were also complaints about lack of interoperability with AHLTA. Most positive comments about Essentris were related to having a program that was reliable and easy to use.

### **Use of Electronic Data in Process Improvement**

The fact that substantial numbers of quality managers and providers did not understand how to get data from the electronic systems was of concern to the Project Team. Data systems should allow for data mining to enhance the ability of staff to conduct quality improvement activities. AHLTA does store data in the Clinical Data Mart. This functionality enables the MHS to collect data for reporting, tracking and trending, which is a great benefit to MTF staff. Although the utilization of the Clinical Data Mart is

accessible to MTF personnel and is openly advertised to the Services, there was not a single mention of this program in any site visit data. The lack of awareness and adoption may be attributable to the complexity of its use. It is also possible that the newness of the program has precluded any widespread use. DoD needs to implement a training program and then ensure that there are champions and super users of the Clinical Data Mart in each MTF quality management department.

Site visits revealed extensive use of homegrown tools in the Quality Management departments, particularly tools for tracking and trending data. Each of these tools was unique to the facilities visited, indicating that each MTF took the time to plan, develop, implement, test, and improve each of these tools; that is to “reinvent the wheel” to measure and improve quality at every MTF. Some tools were much more sophisticated than others. In most cases, the tools were based on Excel spreadsheets and were made available to all staff within the MTFs for use in their quality improvement projects.

### **Interoperability**

The DoD utilizes a number of systems to properly document, track, and manage patients (e.g., AHLTA, ICDB, CHCS, ASIMS, PIMR, AFCITA, CPMT, PHSD Portal, EGL, etc.). Very few of these systems actually talk to one another, and the data is often inconsistent between them. Site visit interviews show that the majority of end users reported specific interoperability limitations with AHLTA, including AHLTA's inability to link to the Composite Health Care System (CHCS) for pharmacy orders and laboratory tests, to Essentris for inpatient data, and to other departments (e.g., emergency department, dental and optometry). The lack of information integration adds another layer of frustration among end users as they are forced to pull up patient data from multiple database sources. Online survey results corroborate site visit findings, as 85 percent of survey respondents describe AHLTA's ability to interface with other systems as poor.

Currently, the DoD is doing extensive work to improve information systems in the MHS that may alleviate some of the issues. Plans include incremental migration of legacy CHCS capabilities to AHLTA, additional AHLTA functions that will include dental records, increased functionality of Essentris to include emergency department records, and expanded use of the Clinical Data Mart.

In general, MHS is perceived to have too many different information systems, now superimposed upon the multitude of local electronic tools and “work-arounds.” DoD needs to bring an information system work group together representing TMA, Services, and MTFs throughout the various regions. The purpose of this group would be to identify the different electronic systems and tools used for tracking and trending data, to determine which should be utilized or abandoned, and to assure those remaining are interoperable. Such work group should be assigned the task of developing criteria, setting standards, and making recommendations to TMA on tools to be used for quality management purposes at the MTF level. This would eventually ensure uniform systems across the MHS.

Given the recent Congressional mandate that the DoD and the Veterans Health Administration (VHA) collaborate on a comprehensive electronic medical record, it might be appropriate to bring together a group of multidisciplinary users from different departments to strategically reduce and/or consolidate the number of programs used. At minimum, any new system should enable providers to seamlessly extract or upload data from old systems, allowing them to eliminate the ponderous task of flipping back and forth between multiple systems to complete their work.

Less than half of the respondents to the online survey believed they had adequate information technology resources to conduct quality improvement activities. Standardization of the data collection programs would benefit all MTFs. These programs should be user-friendly and should easily enable quality staff to track and trend data with appropriate graphs, without extensive manipulation. Standardized programs would benefit military staff in particular as they rotate their job positions, usually to a different MTF, every few years.

## Evidence-Based Process Design

Evidence-based process design means that organizations integrate evidence-based treatment guidelines and protocols into their systems of care to support clinical practice and maximize positive patient outcomes. These organizations use clinical practice guidelines (CPGs) that have been designed with evidence from research and/or expert panels to determine the best processes for ensuring optimal patient outcomes.<sup>10</sup> The highest quality organizations use evidence-based processes as a key component to their quality improvement efforts.<sup>11</sup> CPGs are produced in many different arenas, particularly by specialty organizations and large medical provider organizations. Physicians play a key role in developing and implementing CPGs, although the best CPGs are multidisciplinary in their origin and their implementation. Several physicians reported that CPGs are used to guide practice and do not replace good medical judgment.

The VA/DoD joint program has developed 25 CPGs that are available to all healthcare providers and MTFs (Appendix D lists the CPGs currently available in the MHS). The upcoming AHLTA release will allow incorporation of CPGs into the workflow of patient encounters. Additionally, many different specialty professional organizations have developed CPGs and made them available to their members<sup>12</sup>. During the site visits staff was queried about the use of CPGs, and almost all MTFs reported the use of CPGs to some extent. There was variation in the degree of use by the different departments, and in how the CPGs were used. A few MTFs were highly successful in using the CPGs both to guide practice and to measure their performance during peer review. In contrast, a few departments in a few facilities reported they did not use CPGs at all. Some did not use them because they felt CPGs were not applicable to their patient specialty, while others stated CPGs were not helpful or were unaware of them.

Some CPGs have been developed for application specifically to combat operations, such as the Burn Resuscitation Guidelines and the complementary Burn Flow Sheet. These were developed for the challenge of resuscitating acute burn casualties as they are evacuated across several continents and a variety of care units. The Joint Theater Trauma System (JTTS), conceived through a collaborative effort of the three Surgeons General of the US military, the US Army Institute of Surgical Research and the American College of Surgeons Committee on Trauma, was developed to standardize and improve the care of combat injuries in the active theaters. JTTS is utilized to disseminate such guidelines and to assist deployed providers. The JTTS Director discussed with the Project Team the various CPGs that have been developed. The required use of these CPGs was verified with the medical joint task force commands in the Iraqi and Afghani theaters who actually collect data and track their use. Feedback regarding adherence to the CPGs is regularly given to providers.

Establishment of a process improvement program is an essential part of evidence-based design, because it is how healthcare staff can create their own evidence and contribute to progressive quality enhancement. The Project Team found that process improvement varied between departments within facilities, and definitely between distinct facilities. This variable pattern held for all three Services. Most MTFs were able to collect data, but much of the facility-wide data collected was for compliance purposes. Most departments also collected additional data. In many of those cases staff stated they had too much data, but neither the resources nor the knowledge to actually “crunch” the numbers and analyze it. DoD should provide assistance with data management, data

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<sup>10</sup> Intermountain Health Care; Quality and Clinical Excellence; <http://www.ihs.com/xp/ihc/aboutihc/communityleaders/quality>. St Joseph Hospital, Orange County; Medical milestones; <http://www.sio.org/aboutus/milestones.htm>. The Leapfrog Group; Consumers page at <http://www.leapfroggroup.org/forconsumers>.

<sup>11</sup> Sharp Health Care Systems, Sentara Health Care, Kaiser (see Chapter 10 Comparisons).

<sup>12</sup> American College of Surgeons; American Pediatric Society; American Geriatrics Society; Trauma Surgeons

analysis, and data interpretation to MTFs. As the knowledge and skill of MTF staff in data management increased, the need for assistance would decrease.

Several MTF's staff mentioned difficulty in understanding the operational definitions of some of the measures. TMA has established the Clinical Measures Steering Panel (CMSP) responsible for dealing with these kinds of issues. The CMSP should reaffirm to MTFs that metric definitions are available on the portal, and open up a forum by which MTFs can submit questions and receive responses about how they should be measuring data.

### Performance Monitoring

MHS has implemented several programs to monitor and track chronic diseases, including deploying a large group of case managers and implementing the Population Health Portal. The portal is a data warehouse for aggregating medical clinic data and data collection. It contains patient registries for asthma, diabetes, cancer, cancer screening, and other high-risk populations. The portal is available to all Services and TRICARE for review of their administrative and clinical data. MTFs can stratify and trend their data, as well as compare it with other MTFs' data.

During the site visits, the Project Team asked all clinical staff about their use of the Population Health Portal. Reports of use were somewhat mixed, with many of the MTF staff stating they either never used the Population Health Portal, or that it was not useful because the data were up to six weeks old and not accurate. Table 4.4 displays the results of the online survey of clinical leaders and quality managers on their use of the Population Health Portal, if they had training, and how it was used. Although the sample size is small, it does provide an idea of the overall use of the portal and the types of activities it is most used for in this sample. In general, the survey only partially supports findings from the site visits. The site visits found limited use of the portal while the online survey found not only more widespread portal use, but also data indicating the greatest use of the portal was by health integrators and case managers to help manage and track chronic diseases. It appears in this online survey sample that the portal was used mainly for quality management, although its use as a disease management registry was fairly high.

**Table 4.4: Online survey results of how staff are trained and use the MHS Population Health Portal, from quality manager and clinical leader roles**

	All Services <sup>1,2</sup>
	32.01%
Use MHS Population Health Portal	40.76%
Track/monitor/measure/trend	76.35%
	70.95%
Disease management registry	49.10%
	30.85%
Case management	23.92%
	18.26%
Other	10.79%
	5.67%

<sup>1</sup> 174 total responses (30 Army, 34 Navy and 110 Air Force)

<sup>2</sup> Individual survey responses were weighted to provide an overall percentage with equal representation of each Service.

<sup>3</sup> MHS Population Health Portal users only

## **Patient- and Family-Centered Care**

Patient- and family-centered care is a key dimension of high quality healthcare systems. The IOM defines patient-centeredness as the patient's experience of illness and healthcare and the systems working, or failing to work, to meet individual patient needs.<sup>13</sup> Patient-centered care recognizes that families must be informed about their healthcare, and that healthcare providers should be responsive to their needs and involve them in all aspects of their care. Patient-centered care includes appropriate access to care and implies satisfaction with the care provided. High-level access means that beneficiaries should receive the same level care regardless of their socioeconomic status, rank, or Service. Another aspect of patient-centered care is medical care that is receptive to the cultural and ethnic sensitivities of the patient and family.

All site visits included questions about patient- and family-centered care, as well as cultural sensitivity. The Project Team was impressed to find MTFs and staff very patient-centered in their care. Physicians and other healthcare providers were focused on providing the best care available. All MTFs had customer service staff dedicated to providing a positive experience and addressing beneficiary complaints. Most of those staff worked with the command and quality management groups when there were customer complaints to improve care.

In the online survey of 76 clinical leaders, 90 percent reported that hospital and clinical staff at their facility receives training on diversity, cultural sensitivity, and awareness pertinent to their patient population. Most MTF staff members interviewed did not perceive disparity issues around race, religion, ethnicity, or gender. However, there was a belief expressed that there were access issues related to age. Retirees over the age of 65, in particular, were frequently mentioned as having poor access to care. Many clinicians were greatly concerned that some retirees no longer receive their routine preventive and chronic disease management care. The MTF providers discovered this when such retirees come to the emergency room (ER) for urgent services when regular healthcare visits and maintenance would have averted the acute ER visits. Retiree access to health care is probably the number one issue in terms of access to care because beneficiary harm can and does occur.

Cultural competency was not perceived to be a major problem in the perception of the MTF staff. However, none of the MTFs actually measured for healthcare disparities, and thus had no evidence to support their beliefs about the lack of cultural issues in their MTF. It is reasonable to expect that MTFs know the demographics of their beneficiary population, so that they can be proactive in their planning for care. This knowledge should then be used to plan annual site-specific cultural competency training.

## **Communication and Coordination**

Communication and coordination are cornerstones of healthcare and often represent the biggest problems and sources of errors within the system. There are multiple levels of communication and coordination that must be considered in any enterprise, and this is certainly an issue in the military, where there exist multiple layers of rank and command in addition to the complexities of healthcare services and departments. This assessment focused on communication of quality issues both at the MTF level and MHS-wide.

It was noted that MHS has several mechanisms for both routine and urgent communication. As an integrated system, it can have a system of communication that actually gets to all levels in a relatively timely fashion. At the Enterprise level, DoD relies upon written guidance; committee meetings with Services; and Web access to education, training, and information; along with

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<sup>13</sup> Institute of Medicine. *Crossing the Quality Chasm: A New Health System for the 21<sup>st</sup> Century*. Institute of Medicine. Washington, DC: National Academy Press, 2001.

videoconferences and teleconferences. These mechanisms all appear to be effective means of communication. Service-level Quality Leads were completely involved with MHS/TMA-level activities. During site visits, most MTF staff stated they knew how to access MHS Web sites and received MHS-level information through their Service-level leads.

At the MTF level, communication was a bit more variable. Communication is an active, two-way process – communications that are sent out must be actively received and acted upon. Unfortunately, there are many steps along the way to disrupt that communication. To minimize communication breakdown, most leaders are redundant in their communication, sending out information in multiple ways to ensure that the recipient will receive the information. In some cases, this was problematic. Some staff reported communication overload, often having to deal with up to 100 e-mails per day. In response, some recipients reported simply deleting e-mail because there was no way to know which ones were the most important. Mechanisms to help recipients to prioritize the importance of e-mail are essential.

The online survey asked about communication in two different ways, including a general question about communication at the Service level. Service respondents were generally positive about communication. However, communication was rated more positively vertically up than vertically down. This is consistent with the site visit findings that many staff felt they did not get adequate feedback from their higher headquarters on quality measure reporting or responses to problems such as trouble tickets for the information systems.

There was significant evidence of coordination efforts based on findings from site visit interviews. Almost all MTFs related multiple coordination opportunities between departments, with other Services, and with other providers. This was often enhanced because the coordination was multidisciplinary. Interdisciplinary teams and cooperative coordination were demonstrated in the vast majority of MTFs.

Table 4.5 shows online survey findings, by quality department role, of the effectiveness of communications. For the most part, all sections of quality management either agreed or strongly agreed that information about quality was shared effectively. This was most apparent in the Patient Safety group when compared with the other sections of Quality. Generally, section leaders within the Quality department stated that both vertical and horizontal communication was good. There were few differences between the different roles. When asked about communication mechanisms, video teleconferencing seemed to be the least effective method for most sections, with e-mail being rated the most effective method.

**Table 4.5: Common communication responses from the online survey by role <sup>1,2</sup>**

					Clinical Leader
<b>Key Quality Management/Quality Improvement information is shared effectively with all appropriate and involved staff</b>					
Strongly Agree	32.68%	51.6%	33.6%	41.5%	10.9%
Agree	50.44%	33.2%	51%	46.8%	64.8%
Neutral	9.12%	7.3%	9.5%	8.6%	19.5%
Disagree	6.4%	5%	5.9%	1.5%	4.9%
Strongly Disagree	1.36%	2.9%	0%	1.6%	0%
<b>Vertical Communication (up chain of command) about Quality Management/Quality Improvement is effective</b>					
Strongly Agree	31.32%	32.9%	34.5%	36.9%	15.7%
Agree	47.28%	53.5%	44.9%	40.9%	58.8%
Neutral	18.68%	7.9%	16.9%	12.1%	23.2%
Disagree	2.72%	3.6%	3.7%	8.4%	2.3%
Strongly Disagree	0%	2.1%	0%	1.6%	0%
<b>Vertical Communication (down chain of command) about Quality Management/Quality Improvement is effective</b>					
Strongly Agree	25.49%	19.2%	16.2%	30.4%	8.3%
Agree	33.62%	48.2%	48.4%	39%	44.1%
Neutral	29.29%	17.4%	23.8%	14.8%	29.9%
Disagree	10.22%	7.5%	11.6%	12.1%	17.8%
Strongly Disagree	1.38%	7.7%	0%	3.7%	0%
<b>Horizontal Communication (across the facility) about Quality Management/Quality Improvement is effective</b>					
Strongly Agree	20.24%	19.6%	15.3%	24.3%	4.7%
Agree	44.24%	59.8%	39.5%	48.1%	56.8%
Neutral	17.96%	13.6%	34.2%	13.1%	21.3%
Disagree	16.18%	2.4%	11%	10.7%	17.2%
Strongly Disagree	1.38%	4.5%	0%	3.7%	0%

<sup>1</sup> 394 total responses (76 Army, 85 Navy and 233 Air Force)

<sup>2</sup> Individual survey responses were weighted to provide an overall percentage with equal representation of each Service.

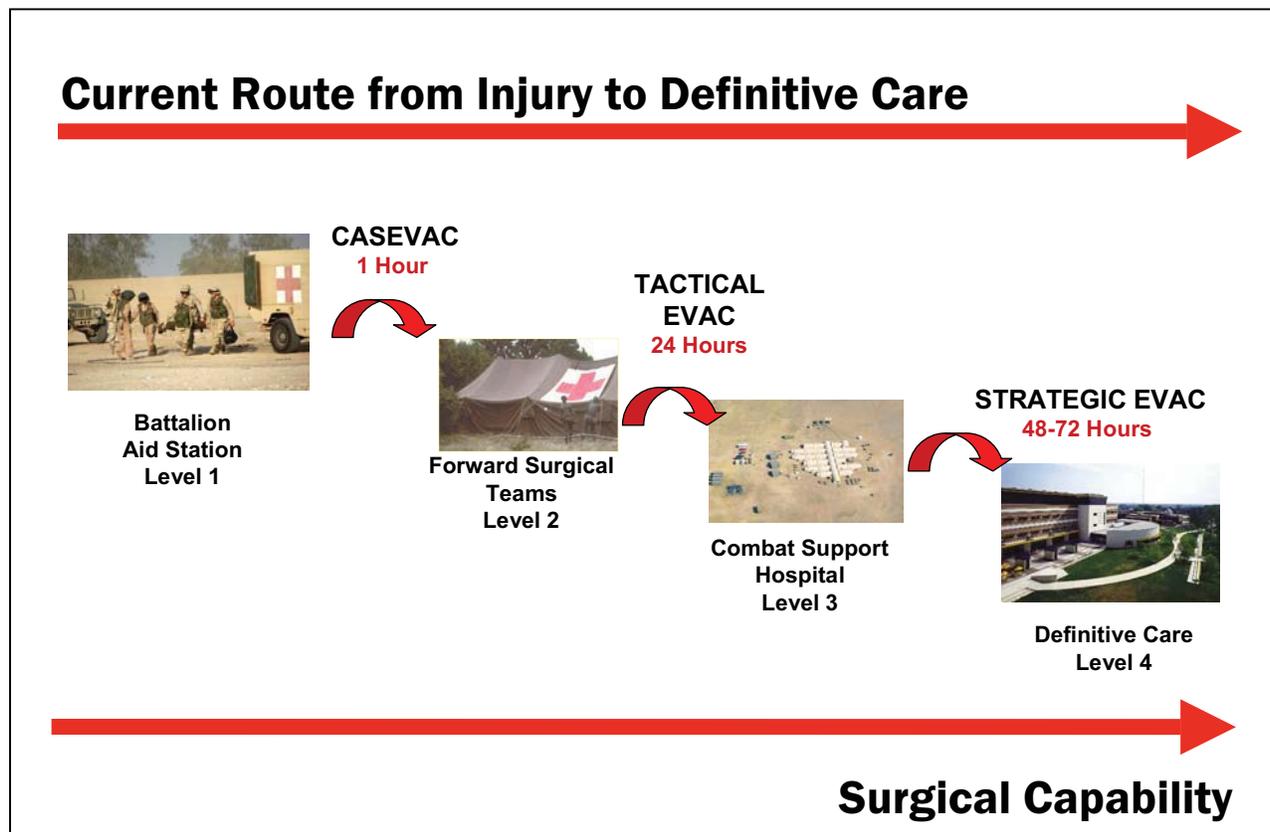
# Quality Management and Patient Safety In Operational and Deployed Forces

## Background

Currently, the United States is engaged in a protracted conflict on two fronts – Iraq (Operation Iraqi Freedom) and Afghanistan (Operation Enduring Freedom). Not since Vietnam has the US faced this level of combat for such a prolonged period of time. Additionally, this war has seen major changes in how the medical force has managed casualties, with amazing results. Establishment of the Joint Theater Trauma System (JTTS) and the Joint Theater Trauma Registry (JTTR) has enabled the US medical forces to improve medical care in the field, resulting in significant reductions in mortality and decreased transport time from the moment of injury to evacuation out of the theater and to a definitive treatment facility.

The JTTR is a database of all medical treatment information on patients who received treatment in any US medical facility, from the battle aid stations up through the terminating medical treatment facility in the United States (Owens et al 2008). The JTTR is part of a greater Joint Theater Trauma System encompassing all of the echelons of care (Figure 4.2) in both combat theaters. This is a complex system that involves all of the medical assets in the theater providing care to the combat troops. The program is the responsibility of the Central Command Surgeon.

**Figure 4.2: Echelons of medical care in the theater of operations**



The JTTS and the JTTR were launched in late 2003 to codify trauma care into a single database and build a program for better management of combat casualties.<sup>14</sup> The system gathers all data including patient demographics, types of wound or illness supplies, location of injury, and all treatments provided. It currently contains information on approximately 30,000 casualties, about two-thirds of whom are treated and returned to duty. Seven nurse managers in all of the Level 3 MTFs abstract data on every medical record to collect 200 data points. Physicians and nurses analyze this data, to determine how medical care can be improved.

Due to the rapid transit of the most seriously wounded through facilities, the variety of practitioners, the mixture of disease injury and wounds seen, and the extreme conditions where care is often rendered, care is difficult to track in Levels 1 and 2. These levels are by necessity overseen by the individual service component/line commanders, who are interested in providing care both expeditiously and appropriately. This is distinctly different from the civilian model and, by its unique nature, defies traditional monitoring models. Level 3 facilities have a more formal oversight to transit to Level 4 and 5 in a predictable and tracked manner. The lessons learned from prior conflicts, most recently Vietnam, have been applied well. This knowledge has led to significant reduction mortality from wounds and the ability to transport warriors halfway across the world in the course of their care. Electronic solutions that transmit information across care sites and services will continue to contribute to care and quality improvement within the theater and in transit from it.

The lessons learned from the JTTR system are innumerable, and the research opportunities prolific. So much data has been collected and studied that the February 2008 issue of the Journal of Trauma dedicated a full supplement to the JTTS research. These research endeavors should continue.

In the interview with the JTTS Director, it was apparent that many medical advances have been made, and service men and women in the combat zone are receiving exceptional medical care. In spite of that, the combat theatre suffers from a lack of systemized quality oversight. The JTTS has greatly contributed to raising the issue of quality of care and patient safety; however, opportunities exist to elevate care oversight with dedicated quality management personnel, a more formalized quality structure, and building quality and patient safety systems into treatment facilities themselves as they are established in theater. At the Central Command level there are also Service component surgeons (Army, Navy, and Air Force Central Commands) responsible for issues, often personnel related, that pertain to their particular Service. The Central Command Surgeon does not have direct visibility of quality or patient safety issues in the theater.<sup>15</sup>

The Joint Task Force Command Surgeon is the senior medical operations officer in the theater. The JTF Surgeon coordinates the medical needs in the theater and reports to the Central Command (CENTCOM) Surgeon. There is also a commander of each hospital and, in the case of multiple hospitals, a commander of the medical higher headquarters. The JTF Surgeons and Brigade and Hospital Commanders in Iraq and Afghanistan<sup>16</sup> reported that, although they were all concerned with patient safety and quality, there was no formalized program. Understandably, when mobile hospitals are deployed into a combat zone, initial efforts are focused on establishing the ability to provide care for casualties. However, in a culture of quality and patient safety, systems to insure both are built in as the treatment facility is constructed. This does not delay vital treatments; it augments them. The majority of US casualties are evacuated out of theater within 72 hours, so the ongoing patients are mostly host nation casualties.

This situation was described eloquently by the Medical Task Force staff in Afghanistan, where the surroundings are austere and dangerous, and it is challenging to get the linens washed and the

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<sup>14</sup> Personal Interview with JTTS Director, CENTCOM JTF Surgeon, Baghdad; July 29, 2008

<sup>15</sup> Personal Interview with ARCENT Surgeon, CENTCOM, August 4, 2008

<sup>16</sup> Personal Interviews with JTF Surgeon Afghanistan, TF MED Afghanistan (Commander, Deputy Commander) July 30, 2008; JTF Surgeon Iraq, Brigade/Hospital Commander, DCCS, DCN; Iraq, July 29, 2008.

floors cleaned. Other complications concern cultural issues. In Afghanistan, family members sleep on the floor next to the ill or injured Afghani patient. In Iraq, where there were far more medical organizations, the senior leaders of the medical Brigade (higher headquarters for the three combat support hospitals in Iraq) had recently begun formalizing a program to encompass quality and patient safety issues, already several years into the conflict.

While there is no formalized program, the medical staffs in each theater have worked to ensure that each patient receives the best care possible under very challenging circumstances. Both medical commanders and JTF Surgeons described efforts to identify all incidents where quality of care may be of concern. Once the event is identified, a report is made, very similar to the reports generated in the fixed facility hospitals outside the combat zone. This process is enhanced with the nurse abstractors who review charts for the JTTS. The commanders review all events and corrective action is taken if needed.

Currently, the Afghani theater is much less developed from the medical asset perspective than Iraq. There are fewer medical treatment facilities and a small JTF that runs the combat support hospital. Quality management and oversight are informal and focused heavily on infection control and prevention. Quality improvement activities such as daily huddles in the emergency room, daily grand rounds and interdisciplinary meetings occur regularly. Theater-wide clinical practice guidelines are utilized. The Command Surgeon of the theater provides oversight that the CPGs are followed.

In Iraq, where there is a medical command, they are currently finalizing the development of a formal quality management program. Assigned personnel are responsible for quality oversight and reporting to the medical command through the Performance Improvement Patient Safety (PIPS) committee. Each unit has a part-time Patient Safety Officer. In Iraq, the PIPS committee is involved in monthly teleconferences with all of the medical treatment facilities. In addition to the PIPS committee, the JTTS holds weekly teleconferences to review patient care issues and to share concerns and best practices with staff at all levels of care. Data is not reported out of the theater due to security concerns.

## **Casualty Evacuation**

Evacuation is another major factor in the care of combat casualties. Casualty care begins at the point of injury, typically with buddy aid or the unit medic. Casualties are then evacuated to the closest medical treatment facility, which might be a battle aid station, a forward surgical team, or even a combat support hospital. Evacuation within the theater may occur by ground or air ambulance (helicopters), while fixed wing aircraft conducts evacuations out of the theater.

The Air Mobility Command (AMC) oversees the Air Evacuation process and is the joint responsibility of the Air Force and US TRANSCOM, housed at Scott Air Force Base.<sup>17</sup> Air Evacuation medical staff are Air Force flight surgeons, nurses, and medical technicians who provide medical care during the flight. The process is enhanced by a comprehensive patient safety program that is monitored at Scott AFB.

The Patient Safety Program is relatively new and there are still some problems in the reporting of events, which is currently voluntary. Near miss reporting is encouraged, and the number of events being reported has increased lately. An Air Evacuation working group with representatives from the major Air Force commands meets monthly to share patient safety and performance improvement information. The group also publishes a quarterly Patient Safety newsletter. Patient safety information is reported to the Air Force Surgeon General, but not to the DoD Patient Safety Center (PSC). The Patient Safety Officer at AMC does not interact with the DoD PSC or the MHS Clinical Quality Forum. Patient safety data can be extracted only manually because there is no electronic

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<sup>17</sup> Personal Interview with Air Mobility Command Flight Operations and US TRANSCOM Patient Safety Officer

medical record, and there have been reported problems with lost paper records when AMC conducts patient safety investigations. However, care given in-theater and in-flight can be documented using the Joint Patient Tracking Application, which transfers the data to the Theater Medical Data Store. Providers access the Theater Medical Data Store through the Bidirectional Health Information Exchange interface in AHLTA. A fully integrated electronic medical record would further enhance patient safety.

Medical personnel in the theater of operations are providing medical care throughout the evacuation process, from the point of injury to the terminal point of care. The JTTS and the JTTR, in particular, have enhanced the ability for staff to improve the quality of care provided. A new quality improvement and patient safety program has been initiated in Iraq, but is lacking in Afghanistan and could not be duplicated with the staff currently assigned to that theater.

Additional issues pertain to the reporting of patient safety and quality improvement information. Staff stated that information is not reported upward, but stays in the theater because of security concerns. In Afghanistan there is no one dedicated to monitoring quality and patient safety anywhere in the theater. The Task Force Commander does not feel there is enough staff to assign these duties internally. Medical professionals in both theaters described the type of interventions that would help them to improve the safety and quality management of combat casualties. These interventions are the basis of our recommendations.

## **Purchased Care Quality Management and Patient Safety**

### **Purchased Care**

In Purchased Care, quality management and patient safety oversight is delegated from the TRICARE Regional Offices (TROs) to the Managed Care Support Contractors (MCSCs), with the TROs maintaining oversight. An in-depth discussion of structure and processes can be found in Chapter 2. Extensive interviews on quality management and patient safety were held with both TROs and the MCSCs. Likewise, two representatives from the Designated Providers and the Uniformed Services Family Health Plan Alliance were interviewed about their unique programs.

While in concept the Purchased Care program provides healthcare equivalent to Direct Care, the two systems cannot be compared side-by-side across the board on quality management, patient safety, and quality oversight. Direct Care, as an integrated system of care, has direct oversight of clinical care because the DoD owns MHS hospitals and their healthcare staff is similarly under DoD control. In contrast, Purchased Care is most synonymous with a civilian health plan that contracts with many different civilian hospitals, physicians, and other healthcare services. In fact, one of the difficulties of maintaining quality within the TRICARE Purchased Care program is that they contract with hundreds of different healthcare entities, each of which has very few TRICARE beneficiaries. This low saturation of TRICARE beneficiaries in the care of any single provider limits the impact of any TRICARE program, hindering MCSCs' efforts to influence quality of care to the degree they would like.

Part of the Project Team charge was to assess quality management and patient safety oversight of Purchased Care by TRICARE. It was not feasible to visit civilian healthcare facilities, but through TRO and MCSCs interviews the Team clarified the mechanisms and adequacy enabling TMA to provide quality management and oversight of the programs. The findings from interviews with the TROs are reported in Table 4.6.

The TROs provide oversight of the Managed Care Support Contract (MCSC) quality management programs. Each TRO has formed a mutually respectful and cooperative relationship with the other two, focusing on the patient and quality of care as the primary goal. Inclusion of the TROs in the MHS

Clinical Quality Forum has enhanced the Purchased Care Program, and TMA should continue this association. Concerns about quality and patient safety were quite similar in all three TROs.

The MCSCs are three separate regional entities that have individualized their processes based on the TRICARE Operations Manual, adding individual programs and quality management modifications to tighten oversight and improve quality. MCSCs are offered incentives to improve performance, including quality of care outcomes, through a pool of money obtained by withholding a portion of their TRICARE funding. These funds are distributed when MCSCs go “above and beyond” their contractual expectations with TRICARE. Table 4.7 shows the findings from the comprehensive interviews with MCSCs.

Data collected in interviews, document review, and discussions on oversight with the TROs, support the perception that all MCSCs provide high quality services, and that the mechanisms and systems in place for quality oversight meet the national standards. Evidence shows that the TROs and MCSCs in all three regions collaborate, communicate, and coordinate frequently, and in a positive manner. All perform well in each of the key dimensions identified in high performing health plans: health plan organizational structure, provider qualifications, patient centeredness, quality management, and clinical care.

**Table 4.6: Quality management and oversight by the TRICARE Regional Offices**

Quality Management and Oversight – TRICARE REGIONAL OFFICES			
			TRO – WEST
 <p><b>Health Plan Organizational Structure</b></p>	<p>Four Division Directors            Chief of Quality Management            Director of Clinical Ops and Medical Director            Monthly Medical Directors meetings between TROs            Monthly meetings with Direct Care MTFs and Health Net            Numerous ad hoc meetings with Health Net            Informal weekly calls between TROs and Office of the Chief Medical Officer (OCMO)            Quarterly meeting with TMA Deputy Director            National Quality Monitoring Contract (NQMC) monthly, semiannual and annual reports on Health Net performance, reviewed by TRO with feedback to Health Net</p>	<p>Chief of Quality Management            Director of Clinical Operations and Medical Director            Two TRO representatives sit as non-voting members on all Humana clinical and corporate committees: Credentials, Patient Safety Peer Review, Behavioral Health, Utilization Management, Disease Management            Monthly Medical Directors meetings between TROs            Monthly meetings with Direct Care MTFs and Humana            Informal weekly calls between TROs and OCMO            Proactively examines network providers in the news for identified problems or concerns</p>	<p>Chief of Quality Management            Director of Clinical Ops and Medical Director            Joint Operations Group (JOG) meeting monthly – TRO-West Medical Director and Sr VP of Finance, MCSC Medical Director and COO oversight of strategic initiatives            Monthly Medical Directors meetings between TROs            Coordinates with Surgeons General representatives on issues for Direct Care MTFs            Informal weekly calls between TROs and OCMO            Assigns subject matter experts (SMEs) to all MCSC requirements</p>
<p><b>HEALTH PLAN ORGANIZATIONAL STRUCTURE</b></p> <p>Operations and Process            Claims            Billing            Coverage and Benefits            Information and Communication</p>			

Quality Management and Oversight –TRICARE REGIONAL OFFICES			
			TRO – WEST
 <p><b>Provider Qualifications</b></p> <p><b>PROVIDER QUALIFICATIONS</b>            Credentialing            Privileging            Competency</p>	<p>Credentialing is delegated to the MCSC but holds a monthly credentialing committee meeting.</p>	<p>Credentialing is delegated to the MCSC, but TRO-South attends MCSC meeting to review credentialing issues, sanctions lists.</p>	<p>Credentialing is delegated to the MCSC, conducts onsite reviews and spot checks.</p>
 <p><b>Patient and Family Centric Care</b></p> <p><b>PATIENT CENTERED</b>            Access            Patient            Satisfaction</p>	<p>Reviews beneficiary surveys from Health Net monthly</p>	<p>Reviews beneficiary surveys from Humana            Provides customer support if MCSC actions do not provide resolution</p>	<p>Reviews beneficiary surveys from Tri-West</p>

Quality Management and Oversight –TRICARE REGIONAL OFFICES			
			TRO – WEST
 <p><b>Quality Management</b></p> <p><b>QUALITY MANAGEMENT</b> Quality Improvement Performance Measurement Transparency Public Reporting Planning, Execution, Monitoring, Improvement</p>	<p>Non-voting member on each of four Health Net quality committees: Clinical Operations, Quality Board, Medical Management Committee, and Credentials Committee</p> <p>Collaboration with other TROs has improved quality and transparency. The goal is to provide a seamless benefit across all regions.</p> <p>Participates in the MHS Clinical Quality Forum</p> <p>Participates in the Clinical Proponency Steering Committee (CPSC) to develop clinical measures.</p> <p>Accesses Population Health Portal for chronic disease management review for Purchased Care</p> <p>NQMC provides external oversight to MCSC performance – comparison report of MCSCs is not shared with MCSCs.</p> <p>Quarterly utilization review meetings</p> <p>Focused studies often review indicators like ORYX® or the Healthcare Effectiveness Data and Information Set (HEDIS) measures</p>	<p>Two TRO representatives sit as non-voting members on all Humana clinical and corporate committees: Credentials, Patient Safety Peer Review, Behavioral Health, Utilization Management, Disease Management.</p> <p>Increased association and interaction with Humana have increased transparency.</p> <p>Participates in the MHS Clinical Quality Forum</p> <p>Participates in the CPSC to develop clinical measures</p> <p>Accesses Population Health Portal for chronic disease management review for Purchased Care.</p> <p>NQMC provides external oversight to MCSC performance – comparison report of MCSCs not shared with MCSCs.</p> <p>Takes focused review studies directly to MTFs</p>	<p>Representatives sit on Tri-West Corporate Quality Management &amp; Improvement and Corporate Clinical Quality Management as non-voting members. Each group has multiple departments with regular meetings.</p> <p>The WRQMOC quarterly data reviews allows for transparency of data, audits, and activities. Findings and recommendations are presented to TRO-West Regional Director for presentation at the Senior Executive Leadership Meeting.</p> <p>Participates in the MHS Clinical Quality Forum</p> <p>Participates in the CPSC to develop clinical measures</p> <p>Accesses Population Health Portal for chronic disease management review for Purchased Care</p> <p>NQMC provides external oversight to MCSC performance; comparison report of MCSCs not shared with MCSCs.</p>
 <p><b>Clinical Care</b></p> <p><b>CLINICAL CARE</b> Prevention Treatment Chronic Care Care coordination Case Management</p>	<p>Friday Medical Directors call with OCMO</p> <p>Recent agreement on The Joint Commission definition of a sentinel event differs from the TRICARE Operations Manual.</p>	<p>Friday Medical Directors call with OCMO</p> <p>Recent agreement on The Joint Commission definition of a sentinel event differs from the TRICARE Operations Manual.</p> <p>All beneficiaries receive preventive care reminder birthday cards.</p>	<p>Friday Medical Directors call with OCMO</p> <p>Participation in WRQMOC allows review of quality metrics. All quality data reviewed.</p> <p>Recent agreement on The Joint Commission definition of a sentinel event differs from the TRICARE Operations Manual.</p>

**Table 4.7: Quality management and oversight by the Managed Care Support Contractors**

Quality Management And Oversight –MANAGED CARE SUPPORT CONTRACTORS			
			TRI-WEST
 <p><b>Health Plan Organizational Structure</b></p> <p><b>HEALTH PLAN ORGANIZATIONAL STRUCTURE</b>            Operations and Process            Claims            Billing            Coverage and Benefits            Information and Communication</p>	<p><b>Strengths</b></p> <p>URAC-accredited</p> <p>Clinical operations committee meets monthly.</p> <p>Regular telephonic interactions with Direct Care MTFs</p> <p>MCSC incentives for quality performance are built into the contract.</p> <p>There is an appeal process in place for Medical Necessity and Factual (add to coverage) appeals.</p> <p><b>Barriers or Gaps</b></p> <p>Certification for Mental Health facilities by NQMC impedes MCSC ability to increase mental health capacity. Facilities see this as duplication since they already have The Joint Commission accreditation.</p>	<p><b>Strengths</b></p> <p>URAC-accredited</p> <p>Four key strategies: evidence-based practice, comparison to industry best practices using benchmarks from HEDIS and Agency for Healthcare Research and Quality (AHRQ), education with Humana for providers and beneficiaries, customer focus</p> <p>MCSC Incentives for quality performance built into contract</p> <p>Guarantees 100% coverage for PRIME beneficiaries</p> <p>Operations Issues Work Group to proactively anticipate changes in military needs</p> <p><b>Barriers or Gaps</b></p> <p>Although there is a waivers mechanism for level of reimbursement, it is a challenge to actually obtain a waiver (e.g., child psychologist in Key West).</p> <p>Sometimes there is rapid shift in numbers of beneficiaries due to military movement of troops (e.g., Fort Hood’s sudden increase in need for mental health providers).</p>	<p><b>Strengths</b></p> <p>URAC-accredited</p> <p>The Quality Management Improvement Committee (QMIC) chaired by SVP has oversight of administrative and clinical quality.</p> <p>Corporate Quality has committees for QIO/QI, Customer Source, Claims, Healthcare Services Study, and Operations</p> <p>Tri-West Joint Operations Group meets with TRO-W monthly and includes both medical directors and TriWest COO, CFO – Empowered to make changes that are approved by Senior Executive Leadership for funding.</p> <p>Reports results using Web-based Performance Assessment Tool</p>
 <p><b>Provider Qualifications</b></p> <p><b>PROVIDER QUALIFICATIONS</b>            Credentialing            Privileging            Competency</p>	<p>Credentialing committee meets monthly and does primary verification of credentials.</p> <p>Twenty-five percent of credentialing is delegated with Health Net oversight.</p> <p>Providers in TRICARE network not under oversight of Health Net are allowed to see patients but can be removed for quality of care issues.</p> <p>Quality Board for Peer Review meets monthly.</p>	<p>Monthly Peer Review meetings with TROs medical director</p> <p>Both perform and delegate credentialing with oversight.</p>	<p>Own Credentialing Committee executes primary source verification.</p> <p>Delegates credentialing to 16 non-profit health plans and two university healthcare systems with Tri-West oversight.</p> <p>Tri-West is Peer Review Organization for medical, surgical, and mental health cases.</p>

Quality Management And Oversight –MANAGED CARE SUPPORT CONTRACTORS			
			<b>TRI-WEST</b>
 <p><b>Patient and Family Centric Care</b></p> <p><b>PATIENT CENTERED</b> Access Customer Satisfaction</p>	<p>Inpatient and Outpatient beneficiary and facility surveys reviewed and changes in processes made appropriately.</p> <p>Quarterly Healthcare Survey of DoD Beneficiaries</p> <p>TRICARE Inpatient Satisfaction Survey (TRISS)</p> <p>TRICARE Outpatient Satisfaction Survey (TROSS)</p>	<p>Customer focus is a key strategy.</p>	<p>Review beneficiary /customer surveys – HCSDB, TRISS, TROSS</p> <p>Certification for Residential Treatment Centers and Mental Health Facilities by NQMC is a barrier, reducing access to care for no good reason.</p>
 <p><b>Quality Management</b></p> <p><b>QUALITY MANAGEMENT</b> Quality Improvement Performance Measurement Transparency Public Reporting Planning, Execution, Monitoring, Improvement</p>	<p><b>Strengths</b></p> <p>Clinical Operations Quality Board meets monthly.</p> <p>NQMC reviews five percent of charts monthly and Health Net reviews, makes adjustment to operations when needed and feedback to providers if appropriate.</p> <p>Health Net prospectively looks at patient safety by pulling AHRQ indicators to identify possible facility/regional trends.</p> <p>Class II &amp; IV Patient Safety Events are reviewed monthly where corrective or disciplinary action can be initiated.</p> <p><b>Barriers or Gaps</b></p> <p>The six- and twelve-month NQMC reviews are not timely, so less helpful to MCSC.</p> <p>Reports allow no comparison between MCSCs.</p> <p>NQMC occasionally recommends actions that are in contradiction to MCSC contract requirements.</p> <p>Health Net does not send any patient safety event information to the Patient Safety Center.</p>	<p><b>Strengths</b></p> <p>Quality Management Coordinators in each of three market areas, with regular reporting up to Quality Manager</p> <p>Several mechanisms to report quality problems. Event or issue reporting available on Intranet can be filled out online and routed to market area manager.</p> <p>Recent Six Sigma Project – Clinical Quality Management Data Systems (CQMD) to provide automatic loading of data using AHRQ clinical codes; Contact Management system – Call centers collect provider complaints automatically populates the online system; 1,200-1,500 potential quality events reported monthly and reviewed</p> <p>Developed five High Performance Teams on clinical quality initiatives</p> <p>NQMC reviews five percent of charts monthly and Humana reviews, makes adjustment to operations when needed and provides feedback to providers if appropriate</p> <p>They require that 96 percent meet standard for care (exceeds TRICARE’s 90 percent).</p>	<p><b>Strengths</b></p> <p>Clinical Quality Committees include Quality Management/Quality Improvement, Credentials, Peer Review, Utilization Review, Healthcare Services and Operations, Health Study, Coding.</p> <p>Incentives to improve performance – JD Powers certification of Call Centers</p> <p>National Quality Monitoring Contract reviews five percent of charts monthly; Tri-West reviews, makes adjustment to operations when needed, and provides feedback to providers if appropriate.</p> <p>Recent quality improvement initiative to prevent surgical infections, advance acute myocardial infarction best practices and breast cancer screening – Uses claims and medical management data.</p> <p>MTFs send Potential Quality Issues (PQI) to Tri-West.</p> <p>Clinical Liaison Nurses are co-located with all Direct Care MTFs.</p> <p>All staff are trained to look for PQIs and report to QM.</p> <p><b>Barriers or Gaps</b></p> <p>Little sharing of data or comparisons, no transparency – could benefit by sharing best practices.</p>

Quality Management And Oversight –MANAGED CARE SUPPORT CONTRACTORS			
			TRI-WEST
 <p><b>Clinical Care</b></p>	<p><b>Strengths</b> Clinical Medical Management committee meets quarterly. MCSC and TRO-North medical directors meet regularly.</p> <p><b>Barriers or Gaps</b> There are some gaps in rural areas due to lack of providers.</p>	<p><b>Strengths</b> Quarterly meeting with TROs to discuss all aspects of Utilization Management, Disease Management and Case Management. Review standards monthly Conducts internal studies on population health issues</p> <p><b>Barriers or Gaps</b> There are some gaps in rural areas due to lack of providers. Only have access to Population Health data for Purchased care population, creating problem in follow through for beneficiaries accessing both systems.</p>	<p><b>Strengths</b> The Lewin Group conducts a review of the disease management efforts by Tri-West. They monitor health plan and ORYX® hospital measures, and AHRQ Patient Safety Indicators to look for outliers. Outliers are reviewed and followed up. PQIs are rated by severity level 1-4 (highest); levels 3 and 4 go to review.</p> <p><b>Barriers or Gaps</b> Tri-West is not happy with the use of Express Scripts because it limits access to medication data that inhibits the disease management program. Need access to M2 database and Purchased Care to afford complete picture of care. Would like better transparency with other MCSCs to develop standards and improve services.</p>
<p><b>CLINICAL CARE</b> Prevention Treatment Chronic Care Care coordination Case Management</p>			

### Designated Providers

Interviews were held with the TMA contractor for the Designated Providers (DPs), the Uniformed Services Family Health Plan (USFHP) Alliance, and the quality team from two of the six DPs – PACMED and Brighton Marine. We reviewed TRICARE’s annual reviews of these programs that rate widespread programmatic elements.

Project Team discussions focused on quality programs and quality management and oversight, in addition to what was found in the annual TRICARE evaluations. The face-to-face interview with USFHP Alliance took place in April of 2008 and reviewed both quality management and patient safety issues. The Alliance is a voluntary forum where the six DPs can meet to discuss common issues and concerns. Like the MCSCs, they submit an annual plan for quality accomplishments over the course of each contract year. That plan is compared to their performance by the National Quality Monitoring Contract (NQMC) annually and submitted to TMA for review. There are no Patient Safety programs required of the Designated Providers in the current contract, but such programs are mandated in the new contract due to initiate October 1, 2008. Despite the absence of the contractual necessity for a Patient Safety program, each plan has one in place. There is a monthly quality management meeting of all designated provider sites to review Healthcare Effectiveness Data and Information Set (HEDIS) data, best practices, and overall operations. The designated providers use the TRICARE Operations Manual for their guidance and standards. The Alliance meets quarterly with TMA.

TMA provides direct oversight of the DPs through:

- Annual onsite evaluation

- Pharmacy audits every 18 months by the Defense Contractor Audit Agency
- Monthly chart reviews by the NQMC
- Six-month and annual reports to TRICARE by the NQMC, including a review of the designated provider annual plan goals
- TRICARE patient satisfaction survey results

An extensive review of the TRICARE annual site visit evaluation of all six DPs was undertaken by the Project Team. Performance was then rated for the six DPs by developing 12 quality theme domains derived from the dimensions of the integrated care model.

### **TRICARE in Europe, Asia, and South America**

TRICARE Area Offices are responsible for oversight of TRICARE in areas outside the continental United States (OCONUS). The Project Team did not directly interview any of the TRICARE Area Offices, but reviewed the guidance provided to them for quality management. The oversight mechanisms are generally similar to the TROs. However, the TRICARE Area Offices are not dealing with MCSCs, rather they are contracting with a series of host nation organizations.

TRICARE provides clear guidance on the processes and procedures to be followed to monitor quality of care. A site visit to Germany afforded the opportunity to discuss the quality oversight with the host nation organizations there. In discussions with staff in Germany, the Project Team was told that the individuals hired to conduct the standards reviews were not nurses. It was unclear whether those individuals had the medical background to actually understand if standards were not being met and to what degree the problems were minor or serious. A minimum standard of a licensed nurse should be set for the individuals performing site reviews.

## **Recommendations**

### **Leadership**

- Continue to promote a culture of safety and quality from MTF commanders and leaders in which problems, near misses, and errors are reported, discussed, and acted upon without the risk of blame or guilt.
- Assign a lead entity to provide clear guidance on Base Realignment and Closure (BRAC) initiatives, including which Service should take the lead if the activity involves more than one Service.
- Implement a system across Services to reduce the frequency of reassignments (as opposed to deployments) of clinical staff during periods of high operational activities, within the primary mission of national security.
- Include Force Health Protection staff, and a quality/patient safety representative from any and all Joint Task Force Surgeon's office at the Command Level (i.e., CENTCOM). Fleet and Marine representatives should participate in the MHS Clinical Quality Forum.
- Design a template for reporting MTFs-specific quality data on their public Web site, to ensure reporting quality consistency across the MHS.

## **Resources**

### **Staffing**

- Senior leadership should develop mechanisms to assist MTFs with shortages affecting their quality departments to better manage patient safety and quality monitoring.
- Provide Service Quality Leads with reports that include actual staffing numbers and unfilled positions of key Quality Management, Performance Improvement, and Patient Safety staff.
- Streamline the contracting process for staff to improve the speed and flexibility of filling positions.

### **Information Systems**

- Address the communication discrepancies between AHLTA leadership perception and the end-users' experience using AHLTA. End-users reported overwhelmingly that AHLTA was not meeting their needs for a variety of reasons including response time, user friendliness, and lack of interoperability with other systems.
- Develop a comprehensive and efficient electronic medical healthcare record for all DoD beneficiaries, including those in the TRICARE and Veterans Affairs (VA) systems, as recommended in the Healthcare Quality Initiatives Review Panel report.
- Work with the MHS Population Health Portal team and Services to improve data accuracy, timeliness and interoperability with other systems. This is particularly important to ensure that administrative data are correct and coding is accurate.

### **Quality Management**

- Standardize education, skill development, data collection methods, dashboards for facility reporting, and process improvement methods to be used by all MTFs for performance improvement
- Prioritize required reporting of metrics from MTFs.
- Provide staff capable of assisting MTF-level personnel gain greater expertise in the appropriate collection, analysis, and application of quality data.
- Expand communication with facilities on the quality metrics, standards, and definitions developed by the Clinical Measures Steering Panel (CMSP) to promote consistency of quality data reporting across the Services.
- TMA and Services should ensure the existence of operable mechanisms for obtaining actionable feedback on root cause analyses or patient safety events that have occurred at their or other MTFs, to enhance opportunities for "lessons learned".
- Assign a Quality/Patient Safety Manager to the Command Joint Task Force Surgeon staff to act as a Subject Matter Expert consultant to the theater for quality and patient safety matters. Direct that this person be responsible for coordinating, overseeing, and reporting quality and patient safety issues to the command.

### **Military Health System Quality Across the Continuum**

- Direct MTFs to regularly collect demographic data in their beneficiary population to allow them to customize healthcare and to anticipate issues around beneficiary needs.

- Continue the current performance-based contracts with incentives for the Managed Care Support Contractors (MCSC) that have led to a more competitive and less audit-intensive program.
- Urge Congress to fund the Air Mobility Command request for an electronic medical record to insure continuity of care for the Air Evacuation System and to promote quality care and patient safety.

# Chapter 5: Assessing Patient Safety

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## Program Background and Rationale

The National Defense Authorization Act (NDAA) for fiscal year 2001 mandated that the Armed Services of the United States collect and analyze medical error data within the military health system (MHS), and required all military treatment facilities (MTFs)<sup>18</sup> to have a patient safety program. The Department of Defense (DoD) Patient Safety Program (PSP) was created to facilitate meeting NDAA requirements.

The PSP is a comprehensive program with the goal of establishing a culture of patient safety and improving the quality of medical care within the MHS. The program:

- Encourages a systems approach to create a safer patient environment
- Engages MHS leadership in quality and patient safety
- Promotes collaboration across all three Services to improve patient safety
- Fosters the trust, transparency, teamwork, and communication necessary to accomplish patient safety goals

The PSP operates under DoD Regulation 6025.13, currently under revision. Each of the Services has developed Service-specific implementation guidelines, which will also be updated when the updated DoD Regulation is signed.

As discussed in Chapter 2, care is delivered to active duty military personnel and their dependants within the MHS either through Direct or Purchased Care. Direct Care has a robust DoD PSP responsible for patient safety. TMA has a monitoring and oversight patient safety role on the Purchased Care side of the MHS. Patient Safety in Direct and Purchased Care is depicted in Figure 5.1.

## Patient Safety in Direct Care

### Management

Patient Safety in the Direct Care side of the MHS is organized into oversight, management, joint operations, service operations, and facility operations, as shown in Figure 5.2. Policy, standardization, and executive oversight for the DoD PSP are provided through the Assistant Secretary of Defense for Health Affairs (ASD (HA)) and the MHS Clinical Quality Forum (MHS CQF).

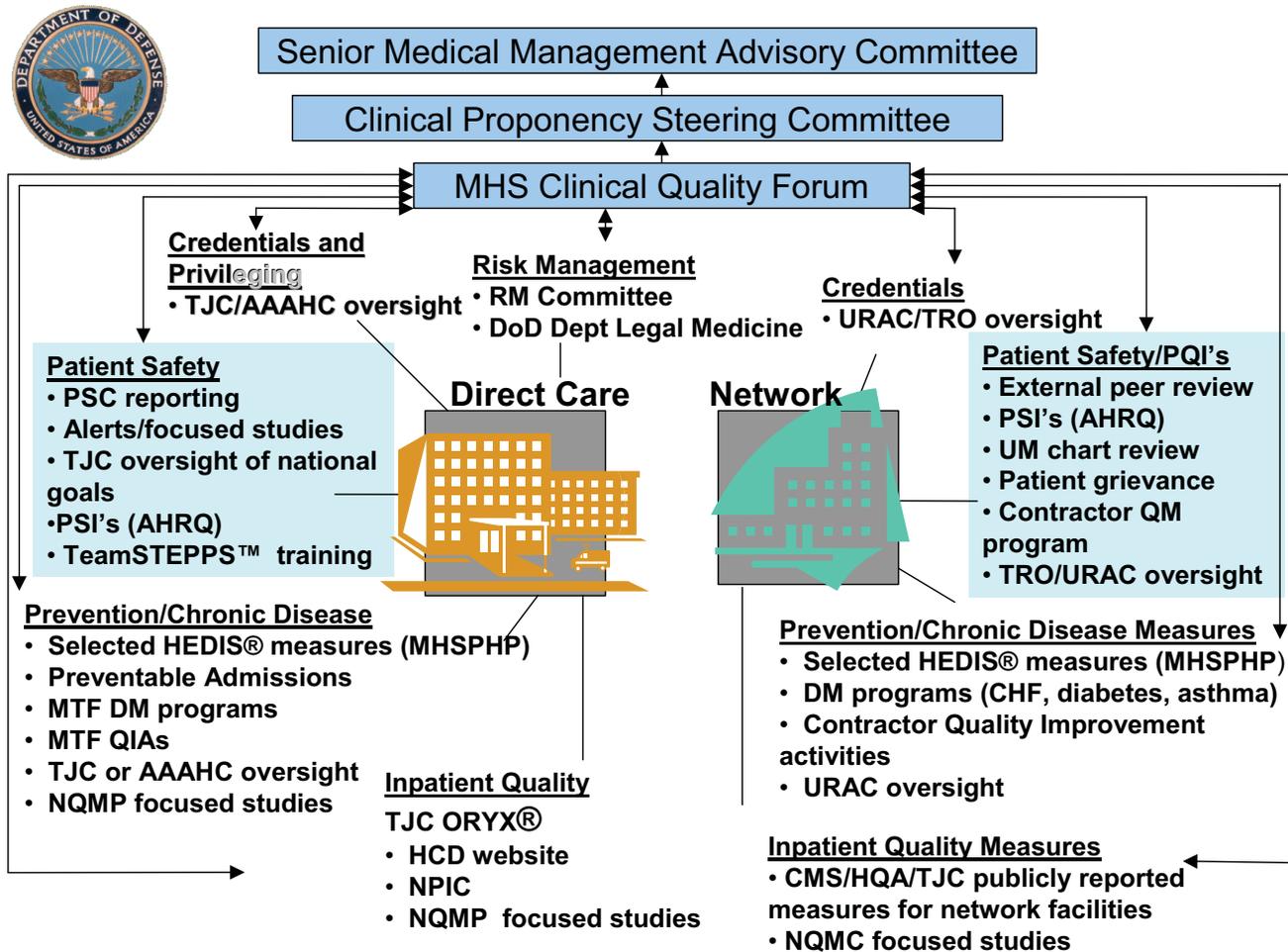
The PSP is managed through the Patient Safety Planning and Coordinating Center, responsible for the joint operations of the Patient Safety Center (PSC), the Center for Education and Research in Patient Safety (CERPS), and the Health Care Team Coordination Program (HCTCP). Each Service each operates its own PSP, managed by a Service Patient Safety representative, with MTF Patient Safety Managers (PSMs) reporting to each Representative.

The MHS CQF recommends policy and standardization and provides the executive oversight for all quality and patient safety functions for which the Office of the Chief Medical Officer (OCMO) is responsible. The Forum meets monthly, with agendas that reach all aspects of quality, including patient safety. This meeting is also a key to MHS communication and information flow.

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<sup>18</sup> The acronym MTF is referred to equally in TRICARE documentation as Military Treatment Facility and Medical Treatment Facility. Military Treatment Facilities may offer medical and/or dental treatment services, and can therefore be abbreviated as MTF, DTF, or MTF/DTF for Medical Treatment Facility or Dental Treatment Facility, or both.

**Figure 5.1: Patient safety-focused components of MHS Clinical Quality Management**



The DoD Patient Safety Program consists of the following elements:

- The DoD Patient Safety Program Office housed at TMA in Falls Church, Virginia
- The Service Patient Safety representatives
  - Army PS Representative housed at Army Medical Department (AMEDD), San Antonio, Texas
  - Navy PS Representative, housed at Bureau of Medicine (BUMED), Washington, DC
  - Air Force PS Representative, housed at Air Force Medical Operations Agency (AFMOA), Bolling Air Force Base (AFB), Washington, DC
- The Health Care Team Coordination Program (HCTCP) co-located with the DoD Patient Safety Program office
- The DoD Patient Safety Center (PSC) housed at the Armed Forces Institute of Pathology (AFIP), Silver Spring, Maryland

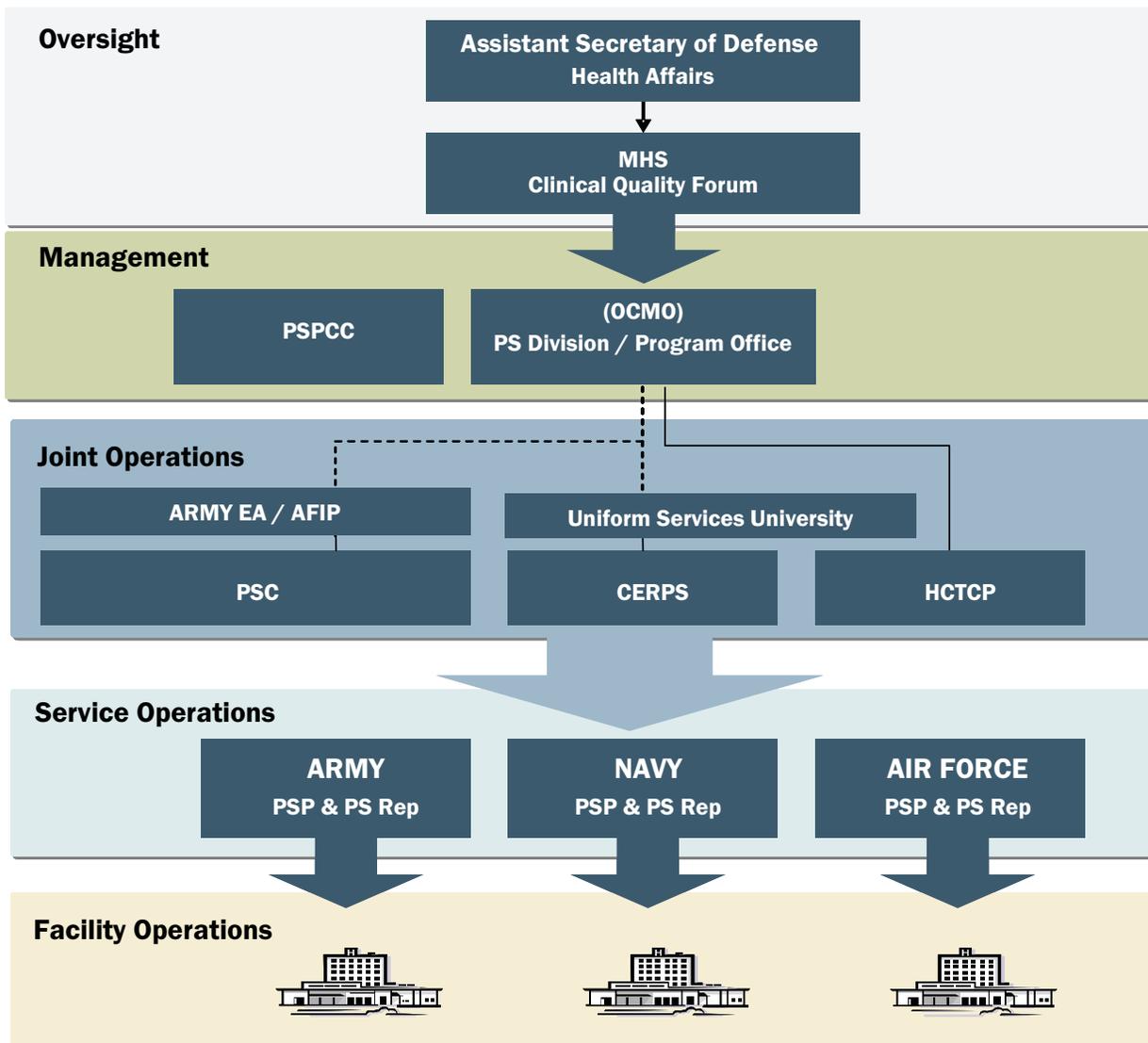
- The Center for Education and Research in Patient Safety (CERPS) housed at the Uniformed Services University of the Health Sciences, on the campus of the Bethesda Naval Medical Center, Bethesda, Maryland

**Patient Safety Planning and Coordinating Committee**

Administration of the DoD PSP is accomplished through the Patient Safety Planning and Coordinating Committee (PSPCC). The Committee meets approximately once every six weeks for at least two days, with representation from all of the above referenced organizations.

The mission of the PSP, as referenced in interviews and program documentation, is to implement effective actions, programs, and initiatives throughout the MHS with the objective of improving patient safety and overall healthcare quality. To accomplish this mission, the program is managed and operates on several levels as previously described.

**Figure 5.2: Oversight and management of the DoD Patient Safety Program – Direct Care Patient Safety Program Office**



The DoD Patient Safety Program Office has oversight of all elements within the Direct Care DoD PSP referenced above, and it collaborates with all Service Patient Safety Representatives. In collaboration with its stakeholders, the mission of the DoD Patient Safety Program Office is to manage and direct a comprehensive DoD PSP appropriate for the MHS by valuing:

- A systems approach across the Services
- Innovation and creativity
- The fostering of a culture of trust and transparency in the MHS
- Communication, coordination, and teamwork

## **Tri-Service or Joint Operations**

### **The Patient Safety Center (PSC)**

The DoD Patient Safety Center (PSC) was founded in 2001. The mission of the PSC is to collect patient safety data from MTFs, research and analyze these data to determine if patterns in patient care errors exist, and then develop and execute action plans to address safety issues. To this end, the PSC has established a standardized taxonomy of event types, standardized reporting codes, and channels of communication of errors and near misses from facilities to and through the Service Patient Safety Officers, and ultimately to the PSC.

The PSC is staffed with 10 professionals and operates the Patient Safety Registry, a database that gathers standardized, clinically relevant information about reported instances and categories of actual events and close calls. This information is then analyzed to identify systemic patterns and practices placing patients at risk across all three Services. When issues are identified, the PSC suggests and supports local interventions designed to reduce risk of errors and to protect patients from inadvertent harm.

According to the PSC and PS Service Representatives, one of the Services has developed different taxonomies on the medical side, with Dental having their own taxonomy. This poses a challenge for the PSC in the analysis of consistent reporting systems across all Services. To date the US does not have a nationally recognized taxonomy for patient safety for all to use. There is no national taxonomy for Dental.

The PSC is committed to implementing one taxonomy to be used for DoD and to support the Agency for Healthcare Research and Quality (AHRQ) in the development of “one national” taxonomy. Adopting one taxonomy is important for analyzing and sharing of data at state and national levels. DoD Inspector General Report also recommended that MHS develop and adopt a common taxonomy for reporting standards and consistent terminology for near misses, adverse/actual events, sentinel events, and potentially compensable events. Currently, Risk Management and the PSC do not share a common taxonomy with mutually agreed upon uniform and mandatory data fields.

The PSC receives data on a regular basis from 174 MTFs through submission to the PSC of Monthly Summary Reports. Each report summarizes patient safety events at that facility into standardized categories. Additionally, the PSC receives reports from MEDMARX, a medication error reporting system operated under contract to the DoD by US Pharmacopeia. In response to serious patient safety events, the PSC also receives root cause analyses conducted by the MTF where the event occurred. And, lastly, the PSC receives Failure Mode and Effects Analyses conducted to analyze MTF processes that may have led to serious patient safety issues.

Upon completing its analysis of these data and information sources, the PSC produces a number of publications and reports. Some PSC publications are available in the public domain, while other publications are protected from public release as Quality Assurance documents since they contain site-specific and event-related information. These publications and their release status are shown in Table 5.1 below.

**Table 5.1: Patient Safety Center publications**

		Quality Assurance Protected
DoD Patient Safety Newsletter	X	
DoD Patient Safety Alert		X
DoD Patient Safety Advisory		X
DoD Patient Safety Focused Review		X
DoD Patient Safety Quarterly Report		X
DoD Patient Safety Annual Report		X
DoD PSC Special Studies		X

The PSC also offers onsite visits to MTFs that may need assistance in addressing specific patient safety issues. In addition, the PSC produces toolkits to address specific but widespread issues, such as the toolkit on Fall Reductions.

All patient safety information that is gathered by the PSC is stored in a centralized database and then analyzed to identify systemic patterns and/or practices that might place patients at risk across all three Services. The PSC uses advanced pattern recognition and natural language processing software to support its epidemiological staff in conducting these advanced analyses. When issues are identified, the PSC suggests and supports local interventions designed to reduce risk of errors and to protect patients from inadvertent harm.

Title 10, U.S. Code, Section 1102 protects the confidentiality and privilege of medical quality assurance records created by or for the DoD as part of the medical quality assurance program. In general, DoD Quality Assurance records may be released outside of DoD as aggregate statistical information. Current DoD regulations do, however, prohibit the identification of facilities when reporting patient safety data to the DoD Patient Safety Center for aggregation and analysis. While each Service can address issues within the bounds of its Service lines of authority, this lack of full transparency within the broader DoD Patient Safety Program limits the ability of the Service Representatives and the Patient Safety Center to conduct analyses within and across Services and to anticipate the overall needs of the MHS community as a whole.

**Center for Education and Research in Patient Safety (CERPS)**

The Center for Education and Research in Patient Safety (CERPS) was established to provide the MHS community with the educational materials, tools, training, and resources necessary to improve the safety and quality of healthcare delivery within the MHS. The mission of CERPS is:

- To facilitate the education and training necessary to develop a military healthcare “Culture of Safety”
- To help facilities meet the accreditation requirements related to safety

- To incorporate and disseminate the best practices available into the individual patient care environments within our system<sup>19</sup>.

To accomplish its mission, the CERPS develops patient safety educational offerings for delivery to DoD Patient Safety Managers and health practitioners. Through the Uniformed Services University of the Health Sciences (USUHS) CERPS offers continuing education credits for all of its training offerings. A list of these offerings is shown in Appendix F.

### **Health Care Team Coordination Program (HCTCP)**

The Health Care Team Coordination program (HCTCP) was created in 2001. Its mission is to promote integration of teamwork principles through optimal use of training, education, research, and collaborative efforts, thus enhancing care and safety of patients within the MHS<sup>20</sup>.

The major offering of the HCTCP is TeamSTEPPS™ (Team Strategies and Tools to Enhance Performance and Patient Safety), a medical teamwork initiative that was jointly developed by the DoD and Agency for Healthcare Research and Quality (AHRQ). TeamSTEPPS™ provides specific tools and strategies for improving communication and teamwork practices of specific medical teams within a MTF. It is rapidly becoming a standard for healthcare team training, both within the US and abroad.

TeamSTEPPS™ is an initiative that requires preplanning, training, and the implementation of an action plan, communication tools, and sustainment activities to secure improvements in the work environment. HCTCP also offers a Learning Action Network to provide educational services to teams that engage in use of the TeamSTEPPS™ model. To determine the effectiveness of TeamSTEPPS™, HCTCP contracted with the RAND - University of Pittsburgh Health Institute (RUPHI) to conduct an external evaluation<sup>21</sup>. RUPHI completed two studies under their evaluation contract. The first project was to evaluate the experience of the Labor and Delivery units in five hospitals that implemented TeamSTEPPS™. The second project was an attempt to identify a set of measures that could be used to measure changes in effectiveness resulting from TeamSTEPPS™.

Moreover, as required by NDAA 2001, the HCTCP has helped to establish Team Resource Centers for research leading to the development, validation, proliferation, and sustainment of the HCTCP. These centers are located as follows:

- Army Trauma Training Center (ATTC) at Ryder Trauma Center; Miami, Florida
- Air Force Centers for the Sustainment of Trauma and Readiness Skills (C-STARS) at R Adams Cowley Shock Trauma Center; Baltimore, Maryland
- National Capital Area Medical Simulation Center (NCAMSC) at the Uniformed Services University of the Health Sciences, Bethesda, Maryland
- Andersen Simulation Center at Madigan Army Medical Center; Ft. Lewis, Washington

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<sup>19</sup> CERPS website: <http://dodpatientsafety.usuhs.mil/index.php?name=News&file=article&sid=414>, accessed 31 January 2008.

<sup>20</sup> HCTCP website: <http://dodpatientsafety.usuhs.mil/index.php?name=News&file=article&sid=230>, accessed on 31 January 2008

<sup>21</sup> Interview with Donna O. Farley, PhD, MPH, Senior Health Policy Analyst, Co-Director, RAND University of Pittsburgh Health Institute, and Melanie Sorbero, PhD, on 18 December 2008,

## **Service Patient Safety Programs**

Each military Service has a Patient Safety Program. These programs are responsible for the following activities:

- Manage the Patient Safety Program Service operations
- Drive forward a culture change where safety for patients is paramount
- Collaborate around patient safety activities and integrate them into ongoing MHS operations
- Assist in establishing corporate policy related to patient safety, and help standardize its enactment at the Service level
- Identify patient safety best practices and promulgate them within and across the Services
- Gather data to assist with corporate analysis of patient safety events and activities and to develop lessons learned

Each Service has designated a Patient Safety Officer who sits on the Patient Safety Planning and Coordinating Committee and coordinates the activities necessary to turn patient safety policy into action, programmatically within the Service and at the bedside. This is a full-time position for the Army and Air Force. The Director for Clinical Risk Management is the Patient Safety representative for the Navy, as the Patient Safety program is included in the department. Activities for these Patient Safety Officers generally include the following:

- Coordinate and standardize patient safety activity across their Service
- Hold regular planning and information sharing conference calls with MTF Patient Safety Managers
- Aggregate important patient safety-related information gathered from MTFs within the Service and forward to the PSC for analysis and reporting
- Disseminate important patient safety-related information from the PSC or other sources to the MTFs
- Conduct analysis of facility and Service-level data to identify trends requiring action
- Provide for the general support and promotion of patient safety within MTFs aligned with their Service

The specifics of each Service PSP are described in more detail in a table contained in Appendix E, which allows for some comparison across the Services.

## **Patient Safety in Medical Treatment Facilities**

It is inside MHS Direct Care MTFs that patient safety practices reach the bedside and have an impact on patients. It is here that all of the policy, coordination, training, process and culture change, and emphasis on patient safety must come together to ensure safe care is delivered to MHS beneficiaries. Approximately 52 percent of the PSP budget is dedicated to staffing of MTF Patient Safety Managers (PSMs).

In smaller facilities, such as clinics that do not have inpatient services, some staff may be designated as responsible for patient safety as well as for other activities, usually risk and/or quality management. Larger MTFs have full-time staff dedicated to and trained as PSMs. The PSM role, whether full or part time, is the main point of contact for the PSP within each MTF.

Activities for the typical PSM generally include the following:

- Become trained in various patient safety activities and be prepared to train others within the facility to assist with promoting patient safety
- Participate in facility-level strategic planning activities to ensure that patient safety is recognized as a key goal for the facility
- Promote patient safety activity in alignment with identified patient safety goals for the facility
- Develop a cadre of safety coaches throughout the facility who can promote a culture of safety
- Identify and build out supporting infrastructure tools that support a culture of patient safety, such as Web pages with information and event reporting features, recall capabilities, and education and training programs
- Investigate patient safety-related events to define root causes, and assist staff in developing improved processes and procedures that reduce patient safety risks
- Gather and report patient safety event data to the Service Patient Safety Officer
- Gather and disseminate patient safety best practices

## Summary

The DoD Direct Care PSP is a comprehensive program that has policies in place, standard operating procedures, designated staff, appropriate training for the staff, and dedicated funding to support the program. Since its inception, the DoD PSP has accomplished the following:

- Invested in an overall Tri-Service PSP and Planning Committee
- Established policies and procedures that guide and direct patient safety activities across the MHS
- Actively worked to create a culture of safety within the MHS
- Invested in the development and implementation of standardized patient safety training
- Invested in having Patient Safety Managers at each facility
- Invested in creating the DoD Patient Safety Center, where adverse event and near-miss data can be aggregated and analyzed to look for trends and reduce risks
- Established extensive training programs through CERPs and HCTCP

## A Culture of Patient Safety

A culture of quality and safety is a key dimension of high performing healthcare facilities. Such a culture of quality and patient safety was evident in many of the MTFs during the site visits. Site visits also determined that patient safety was integrated into the strategic plan in many MTFs as well.

The online survey and onsite interviews indicated that many of the PSMs participate in the annual plan, and the majority reported they had some influence in ensuring that patient safety was included in the plan. Additionally, evidence exists from the site visits that MTFs emphasized patient safety. For example, almost all MTFs promoted national patient safety goals on posters and bulletin boards throughout the hospital, in both public places and patient care units. In several facilities, MTFs showed the Project Team posters and displays that they developed. Some MTFs hold a facility-wide celebration during National Safety Week, while other MTFs display Patient Safety awards bestowed by DoD.

In 2005 – 2006, and again in 2008, DoD contracted with an external organization to deploy the AHRQ Patient Safety Culture Survey to all sites in the Direct Care system. DoD uses the survey results to assess and identify opportunities to improve the culture of patient safety in MTFs. Site visits found that almost all MTF staff knew about the Patient Safety Culture survey and had participated. This was quantitatively confirmed in the online survey, wherein almost 94 percent of respondents (n=93) stated their MTF had completed the Patient Safety Culture Survey.

Over 75 percent of respondents felt their PSPs had improved in the last 24 months, indicating that the program is moving in the right direction in the vast majority of cases. There is substantial evidence that the MHS is working hard and successfully in establishing a non-punitive environment.

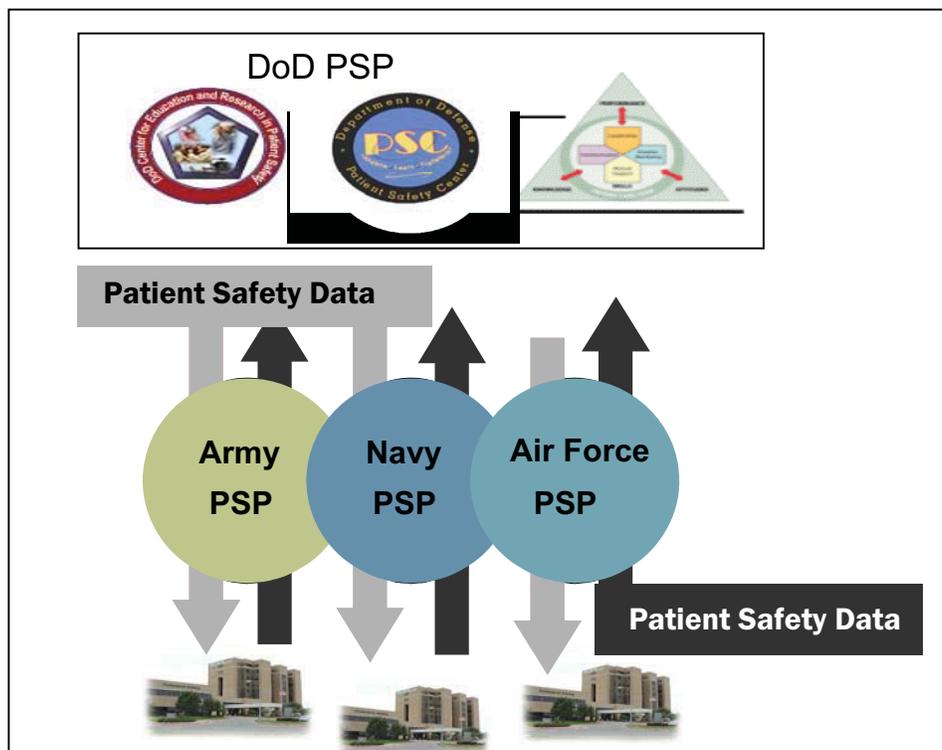
## Patient Safety Event Reporting and Outcomes of Event Analyses

The DoD Patient Safety Program has worked aggressively to develop a suite of offerings to help foster and enhance patient safety in MHS Direct Care facilities. Included in these offerings are robust methods for identifying and reporting errors, sharing near misses, and identifying and mitigating patient safety risks. These methods have been developed by the DoD Patient Safety Center, the Service Patient Safety Programs and Officers, and patient safety and clinical staff at MTFs.

The result is a two-way communication structure that from the top down offers effective channels through which patient safety alerts and directives can flow to points of need, and from the bottom up provides effective channels through which patient safety-related event reporting can take place.

This high level, two-way communications structure is illustrated in Figure 5.3.

**Figure 5.3: Patient safety information channels and flow communication**



The Healthcare Team Coordination Program was formed to address the number one issue found in root cause analyses of patient safety-related events: poor communication. Developed in conjunction

with the Agency for Healthcare Research and Quality at the Department of Health and Human Services, TeamSTEPPS™ is an evidence-based teamwork system aimed at optimizing patient outcomes by improving communication and other teamwork skills among healthcare professionals.

The TeamSTEPPS™ model uses an initial assessment to determine baseline team performance characteristics, segued by the delivery of customized training modules that address specific identified issues for each team. The model then works to sustain changes brought about by the training over time. TeamSTEPPS™ has been delivered in high-risk clinical environments in the MHS, such as labor and delivery.

TeamSTEPPS™ has received international level recognition as a highly effective method for improving work team communications and performance.

Standardized training modules have been developed by CERPS to provide all staff who works in patient safety with a common language and common work processes. CERPS conducts research into the use of the “Clinical Microsystems Framework”, which is a method and training program designed to help staff understand their work environment and move them towards informed actions for the improvement of the safety and quality of care.

The Clinical Microsystems Framework was developed by leading physicians at the Dartmouth Medical School, and utilizes the clinical skills of assessment, diagnosis, treatment, and follow-up that are intuitive to healthcare providers. It then layers on quality improvement tools and thereby equips clinical teams to engage in improving the safety, and quality of outcomes, of their work environment. The Clinical Microsystems Framework is essentially a unit-level performance improvement framework. In that regard, the Services are using other performance improvement frameworks, including Lean Six Sigma (LSS) and focused Plan Do Check Act (PDCA). All of the process improvement frameworks have unique features and language that may or may not complement one another. The Project Team recommends a common approach to quality improvement and patient safety performance improvement processes and tools across the MHS.

### **Event Reporting**

Event reporting is a key element of the PSP. The DoD PSP does not offer one standardized electronic Patient Safety Reporting System (PSRS) for use across the entire DoD Direct Care environment. A paper-based system of reporting currently exists. This paper-based reporting effort is not linked with the risk management functions or Centralized Credentials Quality Assurance System (CCQAS) database.

The lack of an electronic reporting system was problematic to many staff who felt that having such a system would not only decrease the time needed to report, but would also increase the likelihood they would report events, particularly near misses. The DoD PSP has created a Tri-Service working group to establish requirements for a DoD PSRS. Commercial Off-The-Shelf systems are currently being evaluated to determine their ability to be configured to meet the identified requirements of the MHS.

Several MTFs have used local resources to develop “homegrown” Web-based event reporting systems to better enable local reporting and investigation of patient safety events. Site visits found a proliferation of such “homegrown” reporting systems. The result is a wide variety of diverse tools across the Services and the different MTFs.

Electronic transmission of patient safety event reports greatly expedites the process of investigation and elimination of potential risks, allowing for electronic tracking of events, follow-up actions, and notifications. Usage of a standard event electronic reporting form is a best practice that should be standardized across the MHS.

Service Patient Safety Program Representatives serve an important role in the two-way communications stream within the DOD MHS Direct Care patient safety community. Specifically, they conduct the following activities:

- Ensure reporting taxonomies and structures are in place for their Service
- Top – Down: Disseminate important patient safety-related information from the Patient Safety Center or other sources to the Service MTFs
- Bottom – Up: Aggregate important patient safety-related information gathered from MTFs within the Service and forward to the PSC for analysis and reporting
- Conduct analysis of facility and Service-level data to identify Service-specific trends requiring action
- Conduct regular (usually monthly) video teleconference meetings with all PSMs in their Service to facilitate two-way communications with Patient Safety staff at facilities

These activities help ensure that important sharing of patient safety risks and mitigation suggestions are disseminated from high level centralized points out to appropriate recipients in MTFs. They also ensure that information about events occurring across facilities within a specific Service are aggregated and analyzed to determine if there are any trends that might warrant investigation, action, and further sharing.

The Patient Safety Manager (PSM) at each MTF identifies and centrally reports problems in medical systems and processes, then implements actions in response that will improve patient safety throughout their MTF. The DoD requires that each MTF have procedures and standards in place for receiving medical incident reports from clinical staff, administrative staff, and patients or their families. In the MTFs, Patient Safety Management personnel evaluate medical incidents to determine how and why they occurred. Patient safety personnel work closely with risk management personnel.

The current system does not allow patients and/or their families to enter event reports; however, patients and/or their families may report events directly to the facility Patient Representative, Patient Safety Manager, or work area supervisor. During site visits several staff indicated that families frequently report events directly to the MTF through one of these venues.

In general, the DoD PSP is doing well in the identification of near miss and errors, and the MTFs are concerned with error prevention. All events at the MTF level are investigated for potential performance improvement actions. The MTF aggregates all data into the Monthly Summary Report and submits this to the Service Representative and the PSC. Interviews with MTF staff indicated that all events are reported and nothing is filtered. The PSC has an epidemiologist and other trained staff to analyze the data and report back to the PSP, Service Representative, and MTFs on a quarterly basis.

## Resources

Some larger facilities within the MHS are staffed with full-time PSMs. Smaller MHS facilities often have PSMs who are “dual-hatted” and assume the duties of a PSM as required among others performed on a daily basis. All PSMs, regardless of status, are responsible for the following activities:

- Sharing near miss and patient safety risk information received from the PSC, the Service Patient Safety Officer, or other external organizations with the appropriate local staff and clinicians to educate them on risks and to help reduce the risk that such an event might happen at the MTF
- Gathering data about errors or near misses at the MTF from involved staff

- Taking appropriate action to investigate causal factors of events through root cause analysis (RCA) or failure mode and effects analysis (FMEA)
- Developing action plans to reduce the risk of certain events happening in the future
- Reporting of errors and near misses and event analysis (RCAs, FMEAs) to appropriate local staff, the Service Patient Safety representative, and then on to the DoD Patient Safety Center

## **Training**

The PSP offers many training and education opportunities. Site visits found that most PSMs had completed the Basic Patient Safety Manager training, as substantiated by the online survey, with approximately 70 percent of the respondents having completed that training. This may reflect an advantage of the PSP in providing centralized funding for these educational and training programs.

PSMs at the facility level play a critical role in educating local staff and clinicians on patient safety and the importance of reporting errors and near misses, and in analyzing local data to determine if there are risks of events or trends that might require analysis and action.

## **Outcomes that Address Medical Errors**

The MHS does seek to address specific medical errors and/or patient safety risks through analysis of data collected from points of care, external sources, and also from internal research. The DoD Patient Safety Center (PSC), the Healthcare Team Coordination Program (HTCP), and the DoD Center for Education and Research all contribute outcomes data to the MHS that addresses specific medical errors and patient safety risks. In addition, the DoD PSP engages with other national initiatives to address specific patient safety issues. These activities and outcomes are discussed in more detail below.

As a result of the data and information analyzed by the PSC, Patient Safety Leadership takes steps to error-proof the system. The PSC produces a variety of end products to address particular trends or patient safety issues, such as evidence-based toolkits, focused reviews based on root cause analysis, alerts and advisories, summary reports, and general patient safety newsletters.

The PSC has developed various toolkits to equip MTFs to address specific patient safety risks, for example the Patient Falls toolkit. Patient falls are the number one patient safety issue in the MHS, and reducing patient falls is a National Patient Safety goal. The PSC-designed toolkit has been made available to the MTFs to help them respond to care standards that require the assessment of every admitted patient for falls risks, and to appropriately protect these individuals. According to the PSC, evaluating the outcome of the use of this toolkit would be a worthwhile research project.<sup>22</sup>

Medication Reconciliation is another National Patient Safety Goal, and the PSC is similarly working on an anti-coagulation toolkit to help reduce patient safety-related events associated with the use of these medications. In our site visits, all PSMs promoted The Joint Commission national patient safety goals as part of their compliance program.

Focused Reviews are produced by the PSC after review of root cause analyses received from the field, literature scans, summary data, and other external and national-level information. They provide detailed information about a specific patient safety issue, and generally recommend some corrective actions to help reduce associated risks. Focused reviews are sent by the PSC to the Service Representatives for dissemination to points of need.

While the PSC does not have the electronic ability to verify the distribution of the Focused Reviews down to the point of care, onsite interviews and Web questionnaire results both indicated that the

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<sup>22</sup> Interview PSC Director, October 2007.

Patient Safety Manager in the MTF does distribute Focused Reviews to the appropriate clinical staff and ensures recommended actions have been taken. There is no visibility at the Patient Safety Leadership level that action was taken, except as may be received through data calls from the field. Some MTFs required that each department conduct at least one root cause analysis per year, even if there was not a reportable event.

Patient Safety Alerts and Advisories generated by the PSC are targeted to address specific issues and are not for public release. These are disseminated in the same way as the Focused Reviews. Again, onsite interview data and Web questionnaire results indicated that they are reaching the target population, but there is no closed loop process in place to ensure that action has been taken.

In addition to alerts and advisories from the PSC, MTF staff receive information from a variety of other outside agencies such as the Food and Drug Administration, the Institute for Safe Medication Practices (ISMP), and manufacturers of drugs or products. Some alerts are sent from the United States Army Medical Material Agency (USAMMA) by e-mail messages called Medical Material Quality Control, or MMQC, messages. The Air Force and the Navy leverage recall notifications offered by ECRI, an independent, nonprofit health services research agency. The Navy subscribes to ECRI Health care risk control system and receives e-mail updates on a variety of topics, including recalls. However, the Navy does not subscribe to the specific recall product. However, these recall summaries likewise do not include PSC information. It would be important for DoD to have a recall system that is comprehensive and has the ability to track actions taken on recalls.

The PSC Patient Safety Newsletter and the Monthly Summary Reports are produced each quarter and targeted to MHS leadership and PSMs at each facility. Newsletters are widely distributed and include general information on patient safety, patient safety award criteria and notifications, information concerning educational offerings, etc. Summary Reports go back out to the field so that MTFs learn about the types of events occurring across the Program.

### **Patient Safety Recommendations for Direct Care**

- Adopt a standard taxonomy for clinical and dental patient safety events including “near misses” that can be shared with Risk Management. Work with AHRQ to support development of the taxonomy.
- Support the use of a single “closed loop” system for all alerts and advisories, whereby leadership can quickly determine whether the alert or advisory was received and what actions have been taken at each location.
- Determine the amount of facility-identifiable data that can be shared with the Patient Safety Center to accomplish complete epidemiological analyses for leadership of the Patient Safety Program and key DoD leaders and to implement lessons learned.
- Evaluate the benefits versus costs of establishing permanent patient safety coordinator positions.
- Formulate research priorities and set an agenda demonstrating what changes are needed in the practice setting to enhance Patient Safety.
- Continue to assess the MTF variability of reporting “near miss” reports, and encourage the submission of “near miss” reporting at the lowest level of staff.
- Reduce Patient Safety events through the use of human factors engineering investigations and the use of simulation centers addressing human factors elements that may be elucidated from root cause analyses or other event reporting.

## **Patient Safety in Purchased Care**

### **Introduction**

Purchased Care was previously described in Chapter 2. This section discusses how patient safety itself fits within the DoD purchased care system. As previously stated, since Direct Care MHS facilities cannot cover all beneficiaries, MHS contracts with a civilian network of providers and facilities to augment care delivery.

While Patient Safety within the Direct Care operations of the MHS is funded and staffed as a program, patient safety in the Purchased Care side of the MHS takes on the form of activities embedded within contract management, including oversight and monitoring of the plans and providers within the networks of Purchased Care. Specific elements of such oversight include:

- External peer review
- Agency for Healthcare Research and Quality (AHRQ) Patient Safety Indicators
- Utilization management chart review
- Patient grievance
- Contractor Quality Management program
- TRICARE Regional Offices oversight of clinical quality
- Utilization Review Accreditation Commission (URAC) certification

The levels of management and oversight within the purchased care side of the MHS related to Patient Safety can be seen in Figure 5.4.

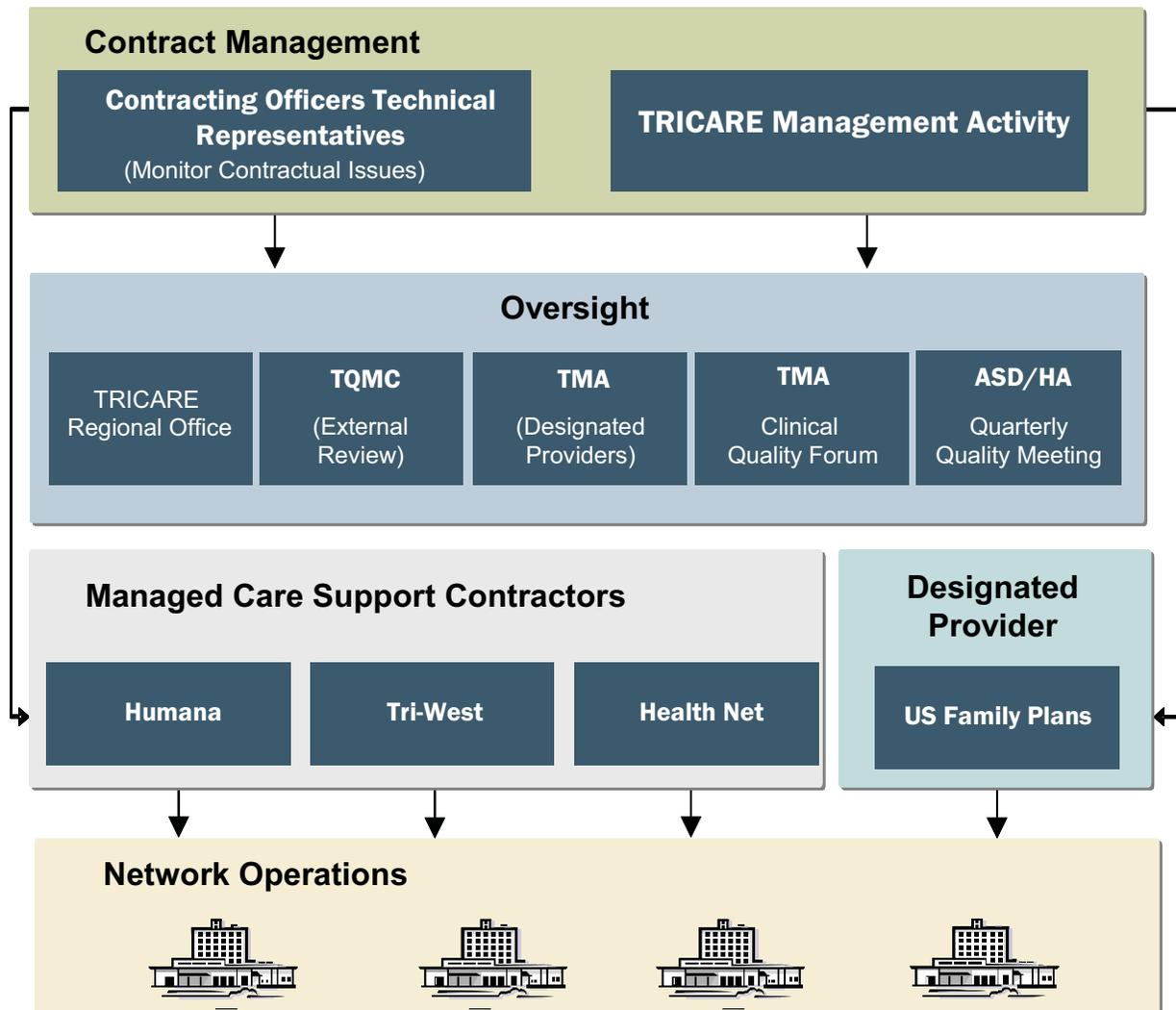
### **Description of the Managed Care Support Contractors and Designated Providers Oversight Mechanisms**

Managed Care Support Contractors (MCSCs) and Designated Providers (DPs) were discussed in detail in Chapter 2. To ensure patient safety in the Purchased Care environment, the MHS uses contract requirements and conducts oversight and monitoring of health plan and provider activities.

Oversight is provided by both TRICARE Management Activity (TMA) and the Contracting Officer's Technical Representatives for each contract. The original MCSC and DP contracts did not contain specific language related to patient safety, but did require the contractors to follow the TRICARE Operations Manual articulating the quality of care that contractors must achieve.

The multi-year MCSC contracts were under re-bid at the time of this study, and the Project Team did not review the statement of work from the Request for Proposal for the next generation of contracts due to active procurement regulations. Therefore, it is unknown at this point as to what exact contractual requirements will exist in new contracts for each MCSC as regards patient safety.

**Figure 5.4: Purchased Care - Contract and management oversight for quality and patient safety**



## Purchased Care Patient Safety Oversight

Oversight for patient safety in Purchased Care is spread across a number of MHS entities. These entities and their role in patient safety oversight are described in the sections below.

### TRICARE Regional Offices

The TRICARE Regional Offices (TROs) responsibility for conducting oversight of the MCSCs was described previously. While Patient Safety is not a contractual requirement, it is a part of the overall Quality Program, and the TROs do conduct oversight to ensure that patient safety is managed well by the providers in the purchased care networks. The scope of this oversight includes such activities as:

- Receipt and review of adverse event reports forwarded from the MCSCs
- Receipt and review of monthly reports regarding progress against AHRQ benchmarks included in established quality management plans

- Monthly meetings with the Medical Directors from the MCSCs
- Analysis of Hospital Compare data to determine levels of safety in provider facilities
- Coordination with contractors to review their own analysis of patient safety within their provider network

### **Designated Provider Oversight by TMA**

TMA has the responsibility for the Designated Provider contract, which expired September 30, 2008, with the new five year contract initiating October 1, 2008. Each contract is sole-sourced by statutory requirements (1997 NDAA) and is in place for five years at a time. They are a full risk, capitated program based on utilization experience and competitive market rates. TMA conducts an annual quality site visit to each of the sites and reviews the DP patient safety plans and reports.

### **National Quality Monitoring Contract – External Review**

The National Quality Monitoring Contract (National Quality Monitoring Contractor) is responsible for conducting peer review of medical malpractice cases where DoD has found that the standard of care was met. They also review quality criteria and annual reports on the status of quality initiatives of the MCSC and designated providers, as well as small focused studies, as directed by TRICARE, into specific aspects of care delivered under the managed care support contracts. The current contract is not funded to conduct in depth-focused studies, with only 450 hours allocated to this portion of the contract each year. These studies help analyze the effectiveness of quality management efforts of the purchased care contractors.

### **Coordinating meetings for Patient Safety**

All purchased care contractors meet with a representative from the Assistant Secretary of Defense for Health Affairs (ASD (HA)) quarterly to discuss quality issues that include patient safety. These meetings are a key information sharing mechanism for improving overall patient safety. The TROs also participate in the MHS Clinical Quality Forum monthly meetings. The National Quality Monitoring Contractor is included in this meeting when invited to present updates or new information from their external review of the MCSCs and DPs.

## **Patient Safety Elements in the Purchased Care Environment**

### **Managed Care Support Contractors**

The MCSCs utilize best practice approaches to establish networks of providers who deliver quality care to MHS beneficiaries. Each network of providers may have large provider organization affiliation with hospitals, specialty clinics, ambulatory care facilities, and pharmacies, etc. that have patient safety programs in place as requirements for external accreditation. Moreover, these networks may have as member organizations very small stand-alone clinics where resources for robust patient safety programs are limited.

No matter the size of the provider within the network, the Purchased Care contractors work with each provider to:

- Monitor adverse event reporting
- Review root cause analyses
- Ensure that National Patient Safety Goals are pursued through monitoring of Joint Commission data
- Monitor IHI bundle data collection efforts, etc.

This type of monitoring is used to gauge the quality and safety of care delivered by providers within each network. The Purchased Care contractors have been very proactive in conducting analysis and assessments, to ensure that providers within their networks operate according to robust quality management plans and work to achieve identified patient safety goals.

### **Designated Providers**

The six DPs also have strong PSPs. A voluntary oversight body called “The Alliance” coordinates many of the DPs’ quality activities, including patient safety. They meet regularly in a cooperative environment to openly discuss the quality initiatives conducted by each provider and to share best practices.

### **Results for Patient Safety in Purchased Care**

Purchased Care hospitals and clinicians could not be directly assessed. However, the TROs and MCSCs were interviewed extensively to gain an understanding of the patient safety systems that have been established in Purchased Care. Based on interviews with all three TROs and MCSCs and the US Family Health Plan Alliance, it was apparent that patient safety and quality monitoring are well integrated and established in the MHS. Purchased Care patient safety results and recommendations were reported along with the quality programs in Chapter 4.

### **Summary of Direct Care and Purchased Care Patient Safety Programs**

The DoD Patient Safety Program (PSP) is performing well in the standard reporting process and analysis of events. The PSP is utilizing information gleaned from event reports and performance measures and is adopting specific actions to remove error-prone processes and systems, thus reducing patient safety risks in the MHS. The DoD has taken a bold step in requiring that *all* sentinel event root cause analyses be submitted to The Joint Commission for review. Many other federal and private or commercial health systems do not have this requirement.

In the direct care system, three quarters of all online survey respondents agree or strongly agree that their patient safety program has improved within the last 24 months. The establishment of team resource/simulation centers for error proofing and training is ahead of most health systems. The DoD PSP actively engages in performance measurement, researches ways to enhance measurement, and engages in national level performance benchmarking activities. The DoD PSP is aware of several areas needing improvement, and is working towards making necessary changes. MHS and Service Quality Leads should work with the PSP to evaluate those issues that are outside PSP control to better integrate patient safety into the MHS system, particularly as it pertains to staffing and information systems at the MTF level.

## **Chapter 6: Credentialing, Privileging, Peer Review, and Risk Management**

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In the Department of Defense (DoD), Risk Management guidelines are found in DoD Directive 6025.13 (dated May 4, 2004). The guidelines include standards for peer review, credentialing and privileging, and reporting. Each of the Services also has its own Directive, specifying how it will meet the DoD policies. Risk Management regulations include:

- Department of Defense Regulation 6025.13 dated May 4, 2004 (currently under revision)
- Army Regulation – 40-68 dated February 26, 2004
- BUMED Instruction – 6010.17B
- BUMED Instructions: Risk Management Program 6010.21
- Credentials Review and Privileging Program 6320.66
- Adverse Privileging Actions Peer Review Panel Procedures and Healthcare Provider Reporting 6320.67A
- Quality Assurance Program 6010.13
- AFI44-119 dated September 24, 2007

DoD and Service regulations require that each Military Treatment Facility (MTF) implement active risk management systems and programs to reduce or mitigate liability risks associated with actual or alleged medical malpractice. Further, the MTFs are to use those programs to reinforce other medical quality assurance activities. Risk management programs shall encompass the potential risk of liability for death or disability benefits to members of the uniformed Services arising from possible substandard medical care, including care provided in a field environment.

Risk management programs consist of the credentialing and privileging of healthcare professionals, along with a peer review process to ensure standards of care are met. Risk managers work alongside credentialing managers and patient safety managers to ensure that quality control processes are in place. Risk management is clearly delineated from patient safety in how the two departments view and manage adverse events. The patient safety system monitors events for the purpose of education and implementing systems changes. Risk managers are responsible for determining accountability.

The Department of Legal Medicine manages a registry of closed DoD medical malpractice cases and reviews the cases for trend analysis and quality improvement opportunities. The Department of Legal Medicine does not have direct visibility of Purchased or Dental Care.

The Department of Legal Medicine reviews adverse actions and provides expert reviewers for potential claims against the DoD. The department also manages a registry of closed DoD medical malpractice cases and the Centralized Credentials Quality Assurance System (CCQAS). The Armed Forces Institute of Pathology (AFIP) collaborates with the Patient Safety Division within the TRICARE Management Activity (TMA) Office of the Chief Medical Officer, the Center of Education and Research in Patient Safety at Uniformed Services University of the Health Sciences (USU), the Healthcare Team Coordination Program, and all three Services. The risk management group meets quarterly with representatives from TMA and all three Services.

### **Credentialing and Privileging**

An important part of the risk management program is to ensure that each healthcare practitioner has the appropriate credentials before he or she is allowed to provide patient care. The credentialing

manager collects and verifies the education, licensure, and certification for each practitioner. Once credentialed, practitioners then need to be privileged for the types of services and procedures they will provide in the MTF. MTFs grant privileges based on the education, training, and experience of each provider. Peer review is the ongoing review of each practitioner's practice by a peer, to make sure that the privileges are still appropriate. Practitioners are re-privileged every two years in accordance with DoD Directive 6025.13.

One of the key findings from the Healthcare Quality Initiative Review Panel (HQIRP) report from 2001 was the lack of mechanisms in place to ensure that physicians were properly credentialed and privileged and non-physician providers were properly supervised. Subsequently, the MHS developed policies and procedures requiring strict credentialing and privileging standards. However, there was still no centralized method allowing each Service to really manage the program. The Centralized Credentials Quality Assurance System (CCQAS) system was deployed enterprise-wide as a secure, Web-based electronic database application for MTF personnel to manage credentialing and privileging processes of both military and civilian healthcare professionals. CCQAS also has modules to collect information about malpractice claims, incidents/PCEs/JAGMANs, disability claims, adverse actions, and adverse privileging actions, and it is protected from legal discovery under the provisions of 10 USC, Section 1102.

Interviews were conducted with the Project Officer and key contractor staff in charge of CCQAS development. CCQAS is now a centralized, Tri-Service repository for credentialing, privileging, risk management, and adverse actions for both medical and dental reporting. System access requires a username and password. Users are limited to the modules they are authorized to access based on their position. Individual providers can input their own data into the system over the Web, but the credentialing manager must do the prime source verification. Supporting documents can be scanned into the system. According to the CCQAS Project team, CCQAS 2.8 (the latest version) is now available to 100 percent of all MTFs for credentialing and privileging both Active Duty and Guard and Reserve components. The MHS Learn Web site for Web-based learning comprises 15 training modules. Representatives from all three Services are highly involved in the ongoing development of CCQAS through quarterly meetings. CCQAS has no direct interface with the National Practitioner Data Bank (NPDB). However, it can capture what is in NPDB using a preformatted list to query the NPDB Web site. There is an additional need for a redesign of the Adverse Actions module so that it better reflects the Services' business processes.

Active component credentialing is managed through the MTF of assignment. Each Reserve component handles credentialing differently. Army Reserve credentialing is managed by Army Reserve Clinical Credentialing Affairs (ARCCA) at Ft McPherson, GA. Practitioners are privileged by the facility when they are assigned. USAR Individual Mobilization Augmentee (IMA) credentialing is managed by HRC (Human Resources Command) and privileged by the facility. The Army National Guard members credentialing packets are handled by each state. The Navy Reserves credentialing is managed centrally in Jacksonville, FL, Navy Medicine Support Command (NMSC), and is responsible for all US Navy Reserves credentialing and privileging through the Centralized Credentialing & Privileging Department, (CCPD) in Jacksonville, FL. The Air Force Centralized Credentials Verification Office (AFCCVO) in San Antonio, TX supports the Air Force Medical Service for credentialing. The Air Force uses chain of command and Credentialing & Privileging Point of Contact (POC) at the Air Education and Training Command also located in San Antonio, TX. Contracted privileged providers credentialing packets are handled by the contracting agency but their privileging is executed by the MTF. The Civilian Personnel Office (CPO) provides the credentials package to the MTF who reviews and verifies the information and privileges the applicant if acceptable.

The Credentialing Managers were interviewed at all visited MTFs. Questions focused on program compliance with DoD and Service Regulations, use of the CCQAS program, and on any problems with the credentialing and privileging process. The three Services are at different stages of

implementation of CCQAS modules and assigning responsibilities. Following are the findings from MTFs site visit interviews:

- All MTF credentialing staff interviewed agreed the credentialing and privileging process has been vastly improved since the HQIRP report, resulting in fewer providers arriving for duty without this process having been completed.
- MTFs have incorporated The Joint Commission approval of using an electronic signature on the privileging documents and the electronic Interfacility Transfer Credentialing Brief (ITCB).
- The electronic privileging module in CCQAS version 2.8 has been available since November 2006, but has not been implemented MHS-wide.
- CCQAS has many capabilities that are not being used or have not been made available at the local level.
- All services require both electronic and hard copies of credentialing and privileging files.
- Historical documents required to privilege providers are not stored in CCQAS, and the electronic privileging file is not designed to print, resulting in a need to maintain paper copies and duplication of work.
- CCQAS now has the capacity to accept scanned documents. However, the process averages ten minutes per page, resulting in a burden on workload.
- The Civilian Personnel Office procedure for credentialing civilian new hires and contractors is described as a lengthy process.
- CCQAS does not interact with the electronic system of the Veterans Administration Professional Review Program (VETPRO). Neither organization will accept records on file, requiring practitioners to duplicate credentialing.

Following are findings from an interview with the CCQAS vendor Resources Information Technology Program Office (RITPO):

- Services and components are supported and using all sub modules for Risk Management and Credentialing Management.
- CCQAS has no direct interface with the National Practitioner Data Bank (NPDB). However, it can capture what is in NPDB using a preformatted list to query the NPDB Web site.
- Defense Intelligence Security Agency (DISA) maintains the hardware; there are no issues with security or down time. Only the Office of the Surgeon General approves users. Only high-level command can view their subordinate organizations, there is no cross MTF or Service visibility.
- Reports generated can be filtered and executed at facility level or higher. The ad hoc reports are robust and customizable (can query all credentialing data by field).

The online survey results also supported that all credentialing managers maintain a paper copy of credentialing files.

Both DoD and Service regulations address the requirements clearly, and credentialing managers are confident in their processes. There are a variety of training programs available to credentialing managers and almost all felt competent in their job, with 96 percent of online survey respondents (n=90) reporting CCQAS training. Almost 90 percent of survey respondents had more than one year of experience, while 47 percent had more than five years of experience. Almost 60 percent of this group rated themselves as excellent in their level of competency, making this the most confident in their capability of all quality groups surveyed. The major issue the credentialing managers face is duplication of work. All credentialing managers surveyed and interviewed stated they keep both

paper and electronic records. The Navy, in particular, requires that records be kept in two electronic files.

## **Risk Management**

There are three sub modules in the Risk Management module: Claim Management, Incident Management (Army's version), PCE Management (Air Force's version), JAGMAN Management (Navy's version), and Disability Management. All three Services are using all of their respective Risk Management sub modules. These modules are still not 100 percent deployed, although the Tri-Service functional work group is addressing ways to make them workable for all three services.

Site visits revealed that most sites have developed a local form they use internally. All Risk Management staff reported they would like a standardized electronic form for reporting risk management issues. There were no significant problems with Risk Managers receiving information about PCEs. Information was reported in a variety of common ways, and there was congruence in both our site visit and the online survey data. All risk managers have developed a process by which they monitor events to identify PCEs, in accordance with DoD and Service-level guidelines. The Risk Management module in CCQAS has some known functionality issues, but has a work group in place to address the problems. There is a Tri-Service work group in place to address the issues with CCQAS.

All Risk Managers reported working closely with Patient Safety Managers (PSMs) in monitoring reported events and near misses. That close cooperation continues until the determination of standard of care not being met is made. At that point, the Risk Manager pursues issues through the Risk Management and Legal Medicine channels, and is separated from Patient Safety. Those combined Risk Management/PSMs were queried to see if they perceived a conflict of interest in the dual roles, but most did not have difficulty separating those functions. Almost 60 percent felt Risk Management functions were performed well in their MTF.

## **Peer Review**

Both credentialing and Risk Managers work closely with peer review staff. The peer review process is well delineated in the DoD and Service level regulations. While there are some issues with a few of the operational definitions, most MTF staff did not report major problems with the peer review process. All MTFs reported that staff did review the charts of peers. Most review ten charts per provider per month, which includes all privileged staff, not just physicians.

If the peer review determines that standards of care were not met, MTFs have a process in place for both reporting and holding individual providers accountable. In addition, prior to situations where an actual standard of care problem was identified, peer reviews were sent to commanders for review if negative trends were noted. When those issues arose, providers were supervised and/or monitored continuously and/or placed in a training program to correct the issues.

The regulations regarding peer review and processes for managing cases where the Standards Of Care were not met are clearly defined in the regulations and followed carefully by the MTFs. There is a review process for paid tort claims or cases where the quality of Active Duty care is called into question. In cases where the Surgeons General determine that Standard Of Care is not met, the decision is reported to the National Practitioner Data Bank (NPDB) or to the Defense Practitioner Data Bank (DPDB) in cases of Active Duty care. The AFIP legal medicine receives information on all closed paid claims.

## **Credentialing, Privileging, Peer Review, and Risk Management Recommendations**

Accelerate implementation of the Centralized Credentials Quality Assurance System (CCQAS), across MHS and provide timely and appropriate training in its use, enable all risk management, peer review, and credentialing functions to be performed electronically without duplication.

## Chapter 7: Collaborations

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### Introduction

There was special interest from Congress in how well the Military Health System (MHS) collaborated with national initiatives in their efforts to develop evidence-based quality measures and interventions. Pertinent questions were incorporated in all interviews at the senior leadership level and during the site visits. The online survey also included questions regarding collaborations efforts of the MHS.

### Collaboration With Federal Organizations

Interviews with Service senior quality leaders revealed that each of the Services has made strides in collaborating with national quality and patient safety initiatives. Several areas of collaboration were discussed, including programs that were implemented throughout the Department of Defense (DoD) and others that were more Service-specific.

The MHS has comprehensive partnerships at the federal and national level to support an environment that fosters quality and patient safety. Table 7.1 provides an overview of these collaborations between Military Treatment Facilities (MTFs) and federal organizations. Some of the federal organizations include the Department of Health & Human Services, the Department of Veteran Affairs, the Food and Drug Administration, and the Centers for Disease Control and Prevention. These national efforts include The Joint Commission's National Patient Safety goals, the Institute for Healthcare Improvement's 5 Million Lives Campaign and many others.

One of the most successful DoD-wide collaborations was on TeamSTEPPS™, a collaborative program between the Agency for Health Care Research and Quality (AHRQ) and the DoD. TeamSTEPPS™ is an evidence-based teamwork system to optimize patient outcomes by developing better team communication skills between healthcare professionals. The DoD created this program based on team training that was developed in medical aviation in response to the 1999 Institute of Medicine (IOM) Report on medical errors.<sup>23</sup> Team resource centers are located across the country to train and implement support to key patient safety groups, as well as the fifty-three federally-designated Quality Improvement Organizations. TeamSTEPPS™ is now a fully developed program that includes several products publicly available online at no cost. Current development of a strategic evaluation plan and measures aims to promote further understanding of the effectiveness of TeamSTEPPS™ at the local and national level.

### Collaboration with Other National Organizations

During site visit interviews, almost all of the MTFs reported and showed evidence of some degree of collaboration on a national basis. At a minimum, MTFs with inpatient surgery and intensive care units were reporting data to the Institute for Healthcare Improvement (IHI) on Ventilator Acquired Pneumonia (VAP) and Central Line Infection bundles. This was a new 2007-2008 initiative for which DoD enabled MTFs' participation. Many of the MTFs without intensive care units were initiating the principles of the IHI bundles in the operating rooms and post-operative units. Some MTFs reported they were also initiating rapid response teams, another IHI initiative aimed to improve patient outcomes by training special teams to respond to specific acute issues, similar to "code teams" but applied to a much broader use.

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<sup>23</sup> *To Err is Human*, Institute of Medicine Report, 1999.

Other programs reported in multiple facilities included the National Perinatal Information Center (NPIC) and the National Surgical Quality Improvement Program (NSQIP). Both are designed to improve quality of care through comparison of individual facility data to national data.

The National Perinatal Information Center/Quality Analytic Services (NPIC/QAS) is dedicated to the improvement of reproductive and family health through comparative analysis, program evaluation, and health services research and education. NPIC/QAS is a nonprofit organization that began in 1985 with a charter membership of major perinatal centers across the United States. Since that time it has become recognized as an invaluable information and research resource to the healthcare community. NPIC/QAS has expertise in the analysis of large data sets, development of comparative benchmarking quality and utilization reports, and evaluation of direct service programs.

The NSQIP is a voluntary reporting system developed by the Veteran Health Affairs. Participating sites pay an annual fee to cover management and administration of the program, training of the site’s surgical clinical nurse reviewer, an annual onsite audit, and ongoing support. The fee also covers the use of online Web tools for data submission, online site-specific reports and national benchmarking tools, and semi-annual program reports including observed/expected ratios. Additional benefits include data automation and software programs to support the nurse, continuing education credits for nurses who successfully complete the online training, and four hours of ad hoc/specialized data analysis and reporting per month.

**Table 7.1: Collaboration between DoD and other national organizations<sup>1</sup>**

	<b>Examples of Patient Safety and Quality Initiatives</b>
<b>Department of Health &amp; Human Services (DHHS):</b>	<ul style="list-style-type: none"> <li>DoD Quality and Patient Safety partners with several HHS agencies and workgroups</li> </ul>
<b>Office of the Secretary</b> Supports the overall HHS mission and its agencies. <b>Transparency and the American Health Information Community (AHIC).</b> AHIC is a federal advisory body, chartered in 2005 to make recommendations to the Secretary of the US Department of Health and Human Services on how to accelerate the development and adoption of health information technology.	<ul style="list-style-type: none"> <li>Transparency and the American Health Information Community (AHIC).</li> <li>AHIC has been working to align federal organizations with the President’s 2006 Executive Order on Transparency.</li> <li>The Office of the Chief Medical Officer (OCMO) has provided representation to the AHIC working on standardization of health information technology and quality measures.</li> </ul>
<b>Agency for Healthcare Research and Quality (AHRQ)</b> Public Health service agency in the DHHS that sponsors, conducts, and disseminates research to improve quality, safety, efficiency, and effectiveness of healthcare. Information from AHRQ’s research helps people make more informed decisions and improve the quality of healthcare services.	<ul style="list-style-type: none"> <li>Implementation of TeamSTEPS™ to improve patient outcomes: Simulation projects, ongoing collaboration, Rapid Response System Collaboration, Collaborative Research, Partnership in Implementing Patient Safety (PIPS) Initiative, AHRQ Hospital Survey on Patient Safety, AHRQ Patient Safety Working Group, Patient Safety Compendium, AHRQ Patient Safety Research Coordination Center Steering Committee, DoD Technical Expert Panel</li> </ul>
<b>Food and Drug Administration (FDA)</b> The FDA is responsible for protecting public health by assuring the safety, efficacy, and security of human and veterinary drugs, biological products, medical devices, our nation’s food supply, cosmetics, and products that emit radiation.	<ul style="list-style-type: none"> <li><b>MedWatch</b> is FDA’s voluntary safety and reporting surveillance system for drugs and medical products.</li> <li><b>Sentinel Network</b> is an FDA-sponsored effort to link private sector and public sector post-market safety efforts to create a virtual, integrated, electronic “Sentinel Network.”</li> </ul>
<b>Centers For Disease Control and Prevention (CDC)</b> CDC is the primary federal agency for conducting and supporting public health activities in the United States. CDC’s focus is to protect the health of all people. CDC keeps humanity at the forefront of its mission to ensure health protection through promotion, prevention, and preparedness.	<ul style="list-style-type: none"> <li><b>National Healthcare Safety Network (NHSN)</b> is a national, voluntary, coordinated and comprehensive automated Healthcare Associated Infection (HAI) surveillance program open to all healthcare facilities nationwide. It is central to MHS establishment of a comprehensive standardized enterprise level HAI surveillance program.</li> </ul>

	Examples of Patient Safety and Quality Initiatives
<p><b>Centers for Medicare &amp; Medicaid Services (CMS)</b> CMS works to ensure effective, up-to-date healthcare coverage and to promote quality care for beneficiaries.</p>	<ul style="list-style-type: none"> <li>• <b>Multi-federal Agency Collaboration (CMS, CDC, and AHRQ with DoD).</b> The CMS QIO 9th Scope of Work activities include patient safety. TeamSTEPS™ is a required training for a MD-RN team, specific to the Methicillin Resistant <i>Staphylococcus Aureus</i> (MRSA) reporting/reduction.</li> </ul>
<p><b>Department of Veterans Affairs (VA)</b> The DoD Patient Safety Program continues to work with the VA around the VA-DoD Joint Strategic Plan (JSP). Work associated with the JSP is accomplished through the VA-DoD Patient Safety Working Group (PSPCC).</p>	<ul style="list-style-type: none"> <li>• <b>Joint Strategic Plan.</b> DoD continues to work with the VA's National Center for Patient Safety to accomplish JSP objectives.</li> <li>• <b>Joint DoD and VA Usability Testing of Medical Equipment.</b> White Paper prepared by the DoD Patient Safety Center.</li> </ul>
<p><b>Institute for Healthcare Improvement (IHI)</b> A not-for-profit organization acting as an information resource and support for improving the quality of healthcare and accelerating change.</p>	<ul style="list-style-type: none"> <li>• 5 Million Lives Campaign, a national initiative to reduce incidents of medical harm to US hospital inpatients. The DoD /IHI Data Use Agreement was established in fall 2007, allowing facilities across the MHS to participate as data-sharing members based on individual service guidance.</li> </ul>
<p><b>The Joint Commission</b> An independent, not-for-profit organization, a predominant standards-setting and accrediting body in healthcare.</p>	<ul style="list-style-type: none"> <li>• National Patient Safety Goals</li> <li>• Sentinel Event policies, newsletter, and advisory group</li> <li>• Organizational efforts to improve patient safety and reduce medical errors</li> <li>• Staff and leadership training for MHS</li> </ul>
<p><b>National Patient Safety Foundation (NPSF)</b> A not-for-profit organization fostering multi-stakeholder collaboration to achieve its mission of improving the safety of patients.</p>	<ul style="list-style-type: none"> <li>• <b>National Patient Safety Week</b> is a national education and awareness-building campaign for improving patient safety at the local level.</li> <li>• <b>“Stand Up for Patient Safety”</b> Charter Member program provides a meaningful way for organizations to participate in the patient safety movement and demonstrate a commitment to patient safety both within the organization and in their communities.</li> </ul>
<p><b>The Leapfrog Group</b> A coalition of more than 150 public and private sector healthcare purchasers committed to promoting “big leaps” in patient safety.</p>	<ul style="list-style-type: none"> <li>• DoD, CMS and the US Office of Personnel Management have a liaison on the board of directors.</li> </ul>
<p><b>Institute of Safe Medicine Practice (ISMP)</b> ISMP is a nonprofit organization devoted to medication error prevention and safe medication use. For over 30 years, ISMP has supported healthcare practitioners' efforts to improve patient safety, and it continues to lead efforts to improve the medication use process through impartial, timely, and accurate medication safety information.</p>	<ul style="list-style-type: none"> <li>• The majority of the formalized interaction between ISMP and the DoD Patient Safety Program occurs in the National Coordinating Council for Medication Error Reporting and Prevention (NCC-MERP)</li> <li>• DoD is a subscriber to ISMP patient safety newsletters and alerts and forwards them through the Patient Safety Managers to 165 sites and headquarters worldwide.</li> </ul>
<p><b>United States Pharmacopeia (USP)</b> USP is the official public standards-setting authority for all prescription and over-the-counter medicines, dietary supplements, and other healthcare products manufactured and sold in the United States. USP sets standards for the quality of these products and works with healthcare providers to help them reach the standards.</p>	<ul style="list-style-type: none"> <li>• <b>National Coordinating Council for Medication Error Reporting and Prevention (NCC-MERP)</b> comprises 22 public and private organizational members seeking to maximize the safe use of medications and to increase awareness of medication errors through open communication, increased reporting, and promotion of medication error prevention strategies.</li> <li>• <b>MEDMARX</b> is the voluntary, Web-based, anonymous, non-identified, standardized medication error reporting database developed by United States Pharmacopeia. MEDMARX has been in use in all DoD facilities as the standard medication patient safety reporting tool since 2004. It is currently the only automated tool for patient safety reporting available in DoD.</li> </ul>

	Examples of Patient Safety and Quality Initiatives
<p><b>Association of Perioperative Registered Nurses (AORN)</b> AORN is the national association committed to improving patient safety in the surgical setting. AORN's mission is to promote safety and optimal outcomes for patients undergoing operative and other invasive procedures by providing practice support and professional development opportunities to perioperative nurses.</p>	<ul style="list-style-type: none"> <li>• <b>Perioperative Patient 'Hand-Off' Toolkit.</b> In 2007, AORN and the DoD Patient Safety Program collaboratively developed a Web-based toolkit providing the resources to guide perioperative professionals in standardizing hand-off communications among caregivers.</li> </ul>
<p><b>Association of Women's Health, Obstetric, and Neonatal Nursing (AWHONN)</b> is a nonprofit membership organization that promotes the health of women and newborns. AWHONN's mission is to improve and promote the health of women and newborns, and to strengthen the nursing profession through the delivery of superior advocacy, research, education and other professional and clinical resources to nurses and other healthcare professionals.</p>	<ul style="list-style-type: none"> <li>• <b>Tri-Service Perinatal Initiative.</b> In 2007, the DoD Patient Safety Program awarded AWHONN two contracts to further enhance patient safety efforts in the obstetrics specialty area.</li> </ul>
<p><b>National Quality Forum</b> A private, not-for-profit membership organization created to develop and implement a national strategy for healthcare quality measurement and reporting.</p>	<ul style="list-style-type: none"> <li>• National Priorities for Healthcare Quality Measurement and Reporting: Consensus Report</li> </ul>
<p><b>American College of Surgeons</b> A not-for-profit organization dedicated to improving the care of the surgical patient and safeguarding standards of care.</p>	<ul style="list-style-type: none"> <li>• National Surgical Quality Improvement Program (NSQIP)</li> </ul>

<sup>1</sup> "DoD Patient Safety Program National and Federal Collaboration Information Paper" updated as of Feb 2008.

## Local and Regional Collaborations

Extensive evidence showed that all MTFs collaborated at the local or regional level with multiple organizations. In some MTFs, this included the local Veteran's Health Association or a community hospital. Several MTFs had memorandums of understanding with civilian hospitals for collaborative care, while others had more sophisticated agreements requiring the collaboration of several agencies on a specific type of issue. The latter was most frequently associated with complex care issues, such as traumatic brain injury, comprehensive rehabilitation, or complex surgery.

Comparably to other high performing healthcare organizations, the DoD MHS is doing a very good job of encouraging and supporting collaboration with local, regional, and national initiatives to gather information and cooperate on data reporting, thus contributing to the establishment of national benchmarks and best practices.

## Collaborations Recommendations

- Accelerate the diffusion of TeamSTEPPS™ methods to assure program sustainability and mitigate the effects of high facility personnel turnover.
- Continue to expand collaborative efforts to improve healthcare quality and patient safety initiatives with major national organizations including AHRQ, IHI, The Joint Commission, NQF, NCQA, ACS.
- Further encourage and support collaboration with national, regional, and local initiatives to collect and report quality and patient safety indicators.

## **Chapter 8: Transparency and Public Reporting**

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Transparency of healthcare information and public reporting on the cost and quality improves the quality of care in a variety of ways. First, it requires that providers (hospitals, clinics, and physicians) benchmark their performance against other hospitals, clinics, and physicians. In addition, it encourages public and private healthcare organizations and insurance plans to reward quality performance. By providing a mechanism for consumers to make informed healthcare choices based on quality of care, transparency rewards quality performance based upon informed patient selection. More transparency in healthcare allows a greater focus on quality of care, encouraging mechanisms to reward greater quality. Transparency also allows healthcare organizations to share best practices and learn from mistakes made by others.

In August of 2006, President George W. Bush signed an executive order designed to help increase the transparency of America's healthcare system. The order directed all federal agencies that either administer or sponsor federal health insurance programs to do four things:

- Increase transparency in pricing by sharing information with beneficiaries about prices paid to healthcare providers for procedures.
- Increase transparency in quality by sharing information on the quality of services provided by physicians, hospitals, and other healthcare providers.
- Encourage adoption of health information technology (HIT) standards by using improved HIT systems to facilitate the rapid exchange of health information.
- Provide options that promote quality and efficiency in healthcare by developing and identifying approaches designed to facilitate high quality and efficient care.

### **Transparency at TRICARE Management Activity**

In response to this executive order, TRICARE Management Activity developed a Web site to provide information to service members, consumers, and its beneficiaries. The URL for the Web site is <http://www.TRICARE.mil/Transparency/>. Through the Web site, beneficiaries can compare the costs and benefits of the following health plans:

- TRICARE Prime
- TRICARE Standard and Extra
- TRICARE Reserve Select
- TRICARE for Life
- US Family Health Plan
- TRICARE Dental Program
- TRICARE Retiree Dental Program
- TRICARE Pharmacy Program

Each of the links to the plans offers information about:

- Plan overview – A description of the coverage and fast statistical facts such as the number of enrollees in that program.
- Pricing – Contains information on allowable charges, costs of the program for the different types of enrollees, maximum out-of-pocket costs, co-pays, and point of service options.

- Quality and customer service – This section links to evaluations of the TRICARE program, the Health Care Survey of DoD Beneficiaries, and the Health Program Analysis and Evaluation Division of the TRICARE Web site, where beneficiaries can read about quality studies and review satisfaction survey results.
- Information technology – Provides information on and links to a variety of electronic and Web-based services for beneficiaries, such online appointment making, online drug comparisons, and online enrollment into the system.
- High quality and efficiency – An overview of program size, customer satisfaction, and program performance.

## Public Reporting

High-level interviews revealed that the issue of public reporting was problematic because of concerns about patient privacy under the Health Insurance Portability and Accountability Act (HIPAA), as well as protections of data under US Code Title 10 § 1102. Current regulations state that data cannot be shared unless the organization is a part of a quality program such as The Joint Commission or the National Perinatal Information Center (NPIC). MTFs are allowed to report aggregate data; however, current regulations do not easily allow MTFs to report quality data to the public except for those measures already reported through The Joint Commission. To report data to the public, the DoD must initiate a Data Use Agreement, a timely process. In addition, current regulations do not clearly define “aggregate data”. Through the MHS Clinical Quality Forum, substantial progress was made in resolving these issues. Better guidelines and processes will improve the ability of MTFs to report their data when the new regulation goes into effect later in 2008.

Public reporting in the Purchased Care system is much more widespread. The Managed Care Support Contractors (MCSCs) reported that their data was transparent and widely available in quality programs and to the public. The desired outcome is for Direct Care to be able to report their data to the public with as great a transparency as occurs in Purchased Care. Eventually, the MHS should develop a system in which their Direct and Purchased Care data can be comparatively displayed. Table 8.1 illustrates findings related to transparency and public reporting.

**Table 8.1: Transparency and public reporting**

		Successes or Strengths
 <p><b>Transparency and Public Reporting</b></p>	<ul style="list-style-type: none"> <li>• MTFs cannot easily report data to the public other than ORYX® performance measures and health plan measures data due to US Code Title 10 § 1102.</li> <li>• Not ALL MTFs collect, track, and trend data, or make it available to all staff online.</li> </ul>	<ul style="list-style-type: none"> <li>• All inpatient MTFs report their data to The Joint Commission and make it available on Web site.</li> <li>• MTFs participate in collaborative initiatives with IHI, the coordinating organization for reporting patient safety measures for the entire MHS.</li> <li>• Most MTFs collect, track, and trend data that is available for most staff to review online.</li> </ul>

## **Transparency in Direct and Purchased Care**

Transparency and public reporting in Direct Care were evaluated in multiple dimensions. There was investigation of the degree of transparency within each MTF, between MTFs in the same Service, and between different Services. Queries were made about transparency during the site visits and in the online survey. In general, MTFs reported data upward, as they were instructed to do by higher headquarters. Few MTFs report additional data to the public, most citing lack of ability due to restrictions by higher headquarters.

At the MTF level, one of the major transparency issues concerned problems in obtaining all of the beneficiary data that were shared by the Direct Care and Purchased Care systems. Neither system is able to access data from the other for reporting purposes, as shown in Figure 8.1. This is a major issue that DoD should resolve expeditiously.

## **Transparency in Purchased Care**

Transparency is an issue for patient safety. Traditionally, healthcare has been tight-lipped when patients are harmed in any way by the caregiving community. This type of an environment stifles the opportunities for learning that come with openly discussing, analyzing, and mitigating the risks of similar events happening again.

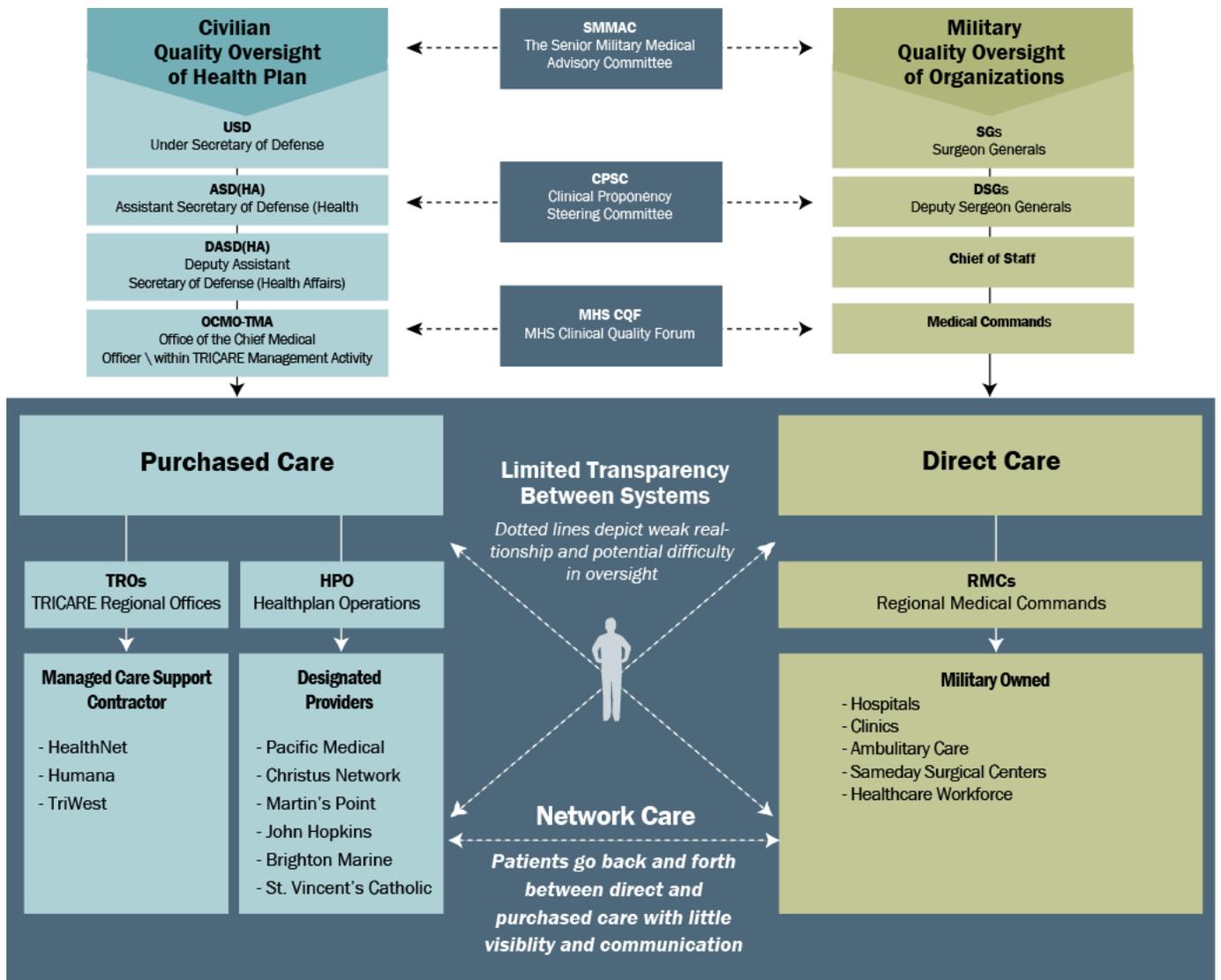
Over the last decade, the patient safety community in general has been working to develop a transparent culture wherein mistakes and risks can be openly discussed, analyzed, and mitigated. The intent is to create a “just culture”, one that is willing to forgive errors and learn from them, but at the same time will not tolerate sub-standard care. Over this same period, the MHS has likewise been working to develop a culture where patient safety is a top priority and transparency is increased.

## **Transparency in Direct Care**

To aid in progressing towards a just and transparent culture in the MHS, the AHRQ Patient Safety Culture Survey was distributed across the DoD Direct Care community (October 2005 to January 2006) to gather data about the culture of the MHS and the local community. This survey allowed local facilities to target areas in need of improvement and to develop action plans for addressing barriers to patient safety. While the survey does not measure transparency directly, it can be used to evaluate the patient safety culture and promote a culture of openness that is blame-free and supportive of internal transparency. This survey is planned for follow-up administration during Fiscal Year 2008, and it should continue to help improve transparency at the MHS and local levels.

One area of transparency that is shared with the public is the Patient Safety Web site and newsletters found at <http://dodpatientsafety.usuhs.mil>. The MHS needs to identify mechanisms to improve transparency in the Patient Safety arena, particularly internally, so that MTFs can share lessons learned from reported events. This is particularly important with root cause analyses and failure mode and effects analyses.

**Figure 8.1: Transparency issues between Direct and Purchased Care**



## Transparency Recommendations

- Continue, within the boundaries of federal statute, to work on mechanisms to increase quality transparency, both internally and externally. Solicit end-user feedback in the design and implementation of transparency initiatives.
- Transfer existing internal transparency within and across Services down to the MTF level.

## Chapter 9: Comparisons

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Congress expressed interest in how the Military Health System (MHS) compares with other public and private organizations. The Project Team chose comparison organizations nationally recognized as high quality organizations. Comparison organizations were matched by attributes similar to those of the Direct Care and Purchased Care organizations. Direct Care is an integrated health system that provides both a benefit and care with internal assets to the organization. This system is similar to managed care organizations such as Kaiser Permanente, Sentara Healthcare, Health Partners of Minnesota, InterMountain Healthcare and Sharp Health Care System. These organizations were used to compare the quality improvement and patient safety systems that the Department of Defense (DoD) has in place for Direct Care. Public systems used for comparisons were the University of California, San Diego for quality management, and the Veterans Health Administration for Patient Safety. For Purchased Care, Health Partners of Minnesota and United Healthcare were selected for both the quality management and patient safety programs, since in Purchased Care these are not separated out as independent divisions of quality management. The following sections describe each of the comparisons, starting with Direct Care.

### Direct Care Comparisons

Comparisons of Direct Care were analyzed, with the findings compiled in Appendix G. Although direct comparisons are somewhat difficult, the MHS generally compares well with many of the chosen organizations. Most of the comparison organizations are significantly smaller and less complicated than the MHS, thus they can more quickly respond to issues.

All organizations strive to foster a culture of safety and quality, and in this regard the military has done well. However, for organizations such as Sentara Healthcare, where a culture of safety and quality is an imperative, and Sharp, where the leadership advances the “Just Culture” philosophy, this concept is integrated into all daily work and is of the highest priority. At Sentara, 40 percent of the leadership’s compensation is tied to patient safety and performance. The MHS is currently adopting a pay-for-performance strategy that places a greater emphasis on quality than ever before.

Transparency is another important dimension of high performing comparison organizations. Sentara, Sharp, and InterMountain stressed they are highly transparent organizations sharing much of their data publicly. Sentara displays their Leapfrog scores on their Web site, and Sharp posts some data online. InterMountain emphasizes internal transparency more so than external, but participates in all public reporting initiatives. Kaiser also stated they were working on improving transparency within their organization. The MHS is less transparent internally at the MTF level. During site visits, most MTF staff stated they did not compare their performance with other MTFs even in the same Service, particularly staff at the departmental level. That changed at higher levels of management, with more of the mid- and high-level managers being aware they could compare data if they desired.

The MHS compares well with basic performance improvement activities, but could benefit from lessons from each of the organizations. Emphasis on transparency is much higher in three of the comparison organizations, with Kaiser being less transparent. Internal transparency is the most important factor the MHS should emulate from the comparison organizations. The best of them are truly transparent internally, sharing all their data with all staff.

The emphasis of the leadership in the comparison organizations on the importance of an overall culture of quality and safety was impressive. This issue arose several times during the interviews, and it was the backbone of the program for both Sentara and InterMountain.

InterMountain has a Research and Training Institute providing frequent education on process improvement activities that is available to all staff and highly encouraged by management. The MHS certainly has the elements for instituting a similar program, which could be fashioned after the existing Patient Safety Program or be modeled more after InterMountain's. Utilizing existing assets such as the National Quality Management Program (NQMP) and the National Quality Monitoring Contract (NQMC) to assist MTFs with data analysis could be of great benefit. The MHS already contracts for Lean Six Sigma training, and MTF staff report this has been very popular. Perhaps MHS could use internal staff to conduct a series of courses on focused Plan Do Check Act (PDCA) as a launching pad for building greater expertise in performance improvement activities, particularly among junior staff. Smaller facilities with no analyst on staff could leverage research departments in the medical centers and researchers in larger community hospitals to mentor personnel with their analytics.

## **Purchased Care Comparisons**

TRICARE Regional Offices (TRO) and the Managed Care Service Contractors (MCSC) vigorously pursue quality and patient safety oversight in the MHS Purchased Care system. That oversight has limitations inherent in the need to contract with a vast collection of providers practicing in multiple facilities which are diverse not only in their geographical site, but in the type of service performed. Quality Management oversight primarily involves three areas:

- Credentialing of providers, either primarily or by delegation to specific entities
- Accreditation of providers through nationally accepted organizations such as the Joint Commission
- Monitoring quality indicators or measures from credible sources as the National Quality Forum, Joint Commission and the Centers for Medicare & Medicaid Services (CMS).

Quality data such as ORYX® or HEDIS and quality measures available from CMS sites, Hospital Compare, Nursing Home Compare and Home Health Compare is available on specific contractors. Claims data provide an additional source of services administered. However, each provider may have inconsistent local definitions of quality, near misses, and patient safety, and a varying individual level of investment in such reporting. This data source inconsistency will persist until and unless MHS reimbursement becomes attractive enough to drive consistent reporting, or providers have a financially critical level of Purchased Care patients.

The comparison systems, United Healthcare and Health Partners of Minnesota, confront similar challenges since they do not directly provide medical services. There appears to be no superior method of Quality Management oversight, whether it is centralized, or, as in the case of United Healthcare, a combination of both regional and central structure. Unsurprisingly, the most powerful driver is an institutional culture of quality and patient safety. Multiple secondary drivers also exist. A consistent definition of data elements to be reported is important for clarity.

Performance by providers must be transparent internally and externally. That performance should be acknowledged in a timely fashion, and it must be in the format of a partnership attitude for improvement instead of an adversarial one. Further acknowledgement in the form of pay-for performance can be a strong driver of quality improvement.

The system should be seen to be responsive to customer satisfaction, and a partner in its improvement. Satisfaction within a Purchased Care system should include both patients and providers. While satisfaction is not identical to quality, the systems feel it is certainly a marker for good care.

## Patient Safety Comparisons

This section addresses congressionally posed questions concerning comparisons of patient safety to other health systems. Using the Institute of Medicine (IOM) framework described below, DoD was compared to three other health systems considered to be the best in practice.

### Introduction

In analyzing how the DoD Patient Safety Program compares with other best practice patient safety programs, it first may be helpful to review how patient safety as a discipline has progressed over the last eight years.

Patient Safety as a discipline in the healthcare community had its inception in 2000 with the release of the IOM report *To Err is Human*,<sup>24</sup> which included the premise that errors can be prevented by designing systems that make it hard for people to do the wrong thing and easy to do the right thing. In healthcare, this meant designing a safer system for the process of care to ensure patients are free from accidental injury. The report became the wakeup call for the healthcare industry and laid out a comprehensive, national agenda to promote patient safety.

Included in this early IOM report were principles for designing safe healthcare delivery systems, such as:

- Leadership and making a corporate culture of safety
- Respect of human limits and process designs
- Promoting effective team functioning
- Anticipating the unexpected
- Creating a learning environment
- Preventing medication errors

The report proposed numerous actions that healthcare systems can take to substantially improve the safety of care rendered to patients. The launch of this report and subsequent IOM quality reports paved the way for healthcare systems to make programmatic changes in the methods and process of delivering quality healthcare.

In 2004, the IOM released the next report in the quality chasm series, titled *Patient Safety - Achieving a New Standard for Care*<sup>25</sup>, which plumbed deeper into the areas of patient safety. The report suggested the key functional elements of a “comprehensive program” for patient safety, based on the premise that safety is an integral part of the delivery of quality care. The key elements were:

- Care delivery processes designed for safety
- Organizational commitment to detecting and analyzing injuries and near misses
- A balance between the need for reporting of events and appropriate disciplinary action for sub-standard care

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<sup>24</sup> “To Err Is Human”, Institute of Medicine, National Academies Press, March 2000

<sup>25</sup> “ Patient Safety-Achieving a New Standard for Care”, Institute of Medicine, National Academies Press, 2004.

In 2007 another publication, *Improving America's Hospitals: The Joint Commission's Annual Report on Quality and Safety 2007*,<sup>26</sup> summarized the quality and safety of care delivered to hospitalized patients between 2002 and 2006. The report suggested that hospital performance consistently improved from year to year, as measured by adherence to evidence-based treatments for heart attacks, heart failure, and pneumonia, as well as more recent measures of surgical care. The report emphasized the Joint Commission's efforts to improve performance measurement and reporting requirements in future years to adequately reflect the organization's goal of improved health outcomes.

In an interview with Lucian Leape, a leading patient safety expert, published in *Health Affairs* in December of 2007,<sup>27</sup> it was noted that patient safety in hospitals is improving, and it is now possible to get to a level of zero defects. Growing recognition of the need for team training, use of trigger tools, improving the competency of physicians, and full disclosure and compensation to injured patients exemplify positive developments. Yet formidable barriers remain, including separatism in how doctors, nurses, and pharmacists learn; inadequate instruction in communication and team-building skills; poorly developed quality and safety curricula; lack of leadership among CEOs and hospital boards; physician apathy; absence of effective systems for accountability; and failure to believe in the possibility of eliminating medical errors and injuries.

Most recently, the study titled *Health Grades Quality Study: Fifth Annual Patient Safety in American Hospitals Study*, published in April of 2008, used Medicare beneficiary data from 2004 to 2006 to conclude that, while modest improvements have been made, patient safety incidents still account for more than 200,000 preventable deaths and nearly \$9 billion in excess costs yearly. The report identifies "Distinguished Hospitals for Patient Safety", the facilities scoring in the top 15 percent according to a ranking methodology developed by the authors.<sup>28</sup>

In summary, since 2000, a mere eight years since the first patient safety call to action was sounded and the first patient safety concepts considered, many health systems around the world have made considerable progress in developing patient safety platforms for their facilities. The key leaders in patient safety, Lucian Leape and Donald Berwick, observe that quality and patient safety have matured, but they also understand that there is still room for additional improvement.

With this understanding of the overall state of patient safety as a backdrop, the evaluation team looked to identify criteria by which the progress made by the DoD Patient Safety Program (PSP) since its inception could be measured. In particular, they sought a way to evaluate the program against the progress made by other integrated healthcare delivery systems considered to be leaders in Patient Safety. The criteria selected were the functional elements of a comprehensive patient safety program as defined by the IOM. The team then evaluated in detail the level of success that the DoD and three best practice organizations had achieved at fully developing the elements necessary for a comprehensive patient safety program. The three Best Practice organizations used to compare against the DoD PSP were:

- The Veterans Administration - National Center for Patient Safety
- Sentara Health System - Patient Safety Program
- Sharp Healthcare - Patient Safety Program

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<sup>26</sup> *Improving America's Hospitals: The Joint Commission's Annual Report on Quality and Safety 2007*. Oakbrook Terrace, IL: The Joint Commission; November 2007.

<sup>27</sup> Peter I. Buerhaus, "Is hospital patient care becoming safer? A conversation with Lucian Leape. Interview", *Health Affairs*, 2007 Nov-Dec; 26 (6): w687-96. Epub, 2007 Oct.

<sup>28</sup> "HealthGrades Quality Study: Fifth Annual Patient Safety in American Hospitals Study", Golden, CO: HealthGrades, Inc., April 2008.

The Project Team determined that if a healthcare system has programs in each of the IOM high level domains, then its Patient Safety Program is in a good position for success. It is also recognized that each comparison healthcare system (including the DoD PSP) is evolving and there will be improvements in each program going forward.

External benchmarking of performance measures occurs in the four initiatives described below.

- AHRQ National Patient Safety Indicators
  - Outside of the PSC efforts, DoD has electronically collected performance data on the Agency for Healthcare Research and Quality (AHRQ) National Patient Safety Indicators (NPSI), and this data is stored in the Web-based Air Force Portal in San Antonio, TX. Through various focused studies conducted by the NQMP contractor, it was concluded that some performance measures had incorrect coding. During the onsite interviews, all Patient Safety Managers (PSMs) indicated that they do look at this data and are aware of the potential problems, but do use it to the extent possible to inform actions that could reduce risks to patients.
- IHI Bundle
  - The Institute for Healthcare Improvement (IHI) has many different quality offerings available to healthcare organizations. Over the past year, MHS has entered into an agreement to participate in the Ventilator Acquired Pneumonia and the Central Lines Bundles. IHI bundles certain interventions together because evidence has shown that, when implemented together, they achieve significantly better outcomes than when implemented individually. Another IHI initiative that many MTFs have discussed implementing is the use of rapid response teams.
- NSQIP
  - The American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) is the first nationally validated, risk-adjusted, outcomes-based program to measure and improve the quality of surgical care. The program employs a prospective, peer-controlled, validated database to quantify 30-day risk-adjusted surgical outcomes, allowing valid comparison of outcomes among all hospitals in the program. Participating hospitals and their surgical staff are provided with the tools, reports, analysis, and support necessary to make informed decisions about improving quality of care.
- CDC Infection Control
  - The Centers for Disease Control (CDC) has a robust infection control program. Many of the MTF infection control nurses correspond and work unofficially with the CDC in their infection control programs.

## Comparison

The IOM Model establishes three domains for a comprehensive patient safety program:

- A culture of patient safety
- A program to enhance patient safety
- An applied research agenda

Each domain contains a number of sub-elements. These high level domains and their underlying elements are shown in Figure 9.1.

**Figure 9.1: IOM domains for a comprehensive patient safety program**

Patient Safety Culture	Program to Enhance Patient Safety	Applied Research Agenda
<ol style="list-style-type: none"> <li>1. Shared Belief</li> <li>2. Organizational Commitment</li> <li>3. Balance Reporting vs. Discipline</li> <li>4. Recruiting / Training of Staff</li> <li>5. Org. Commitment to Detecting Injuries / Near Misses</li> <li>6. Analysis of Injuries and Near Misses</li> <li>7. Open Communications</li> </ol>	<ol style="list-style-type: none"> <li>1. Injury and Near Miss Detection</li> <li>2. Epidemiological Analysis, Hypothesis for Change Generation and Prioritization</li> <li>3. Rapid-cycle Testing</li> <li>4. Deployment &amp; Implementation</li> <li>5. Hold the Gain</li> <li>6. Engage the Patient and/or Families</li> </ol>	<ol style="list-style-type: none"> <li>1. Knowledge Generation               <ol style="list-style-type: none"> <li>a) High Risk Patient</li> <li>b) Testing Fundamental Assumptions</li> <li>c) Developing / testing Recovery Taxonomy</li> <li>d) Integrating Individual &amp; Team Recovery Models</li> <li>e) Integrating Prospective &amp; Retrospective Techniques</li> <li>f) Cost / Benefit Analysis of PS Programs</li> <li>g) Patient Roles</li> <li>h) Evaluating New Technologies for Detecting Near Misses</li> </ol> </li> <li>2. Tool Development               <ol style="list-style-type: none"> <li>a) Early Detection</li> <li>b) Prevention Capabilities</li> <li>c) Verifying Adverse Events</li> <li>d) Data Mining of Large PS Data Sets</li> <li>e) Natural Language Processes</li> </ol> </li> <li>3. Dissemination               <ol style="list-style-type: none"> <li>a) Knowledge Dissemination</li> <li>b) Audit Procedures</li> </ol> </li> </ol>

A complete and detailed table containing all of these domains and a description of how the DoD PSP and each of the comparison Best Practice organizations meets each criteria can be found in Appendix G.

What follows below are highlights from the Appendix. Each domain is explored at a high level, with best practice highlights and areas for improvement for DoD Patient Safety presented in summary form.

## Key Findings and Recommendations

### IOM Domain: Culture of Safety

The first functional domain in the IOM model for a comprehensive patient safety program is a culture of safety. The DoD and all three best practice organizations have active programs in place to address culture change and drive towards a culture of safety. Recent literature suggests that a just culture, one that is not only open to taking responsibility and learning from mistakes, but that does not accept sub-standard behavior, is what should be achieved to enhance patient safety.

Highlighted best practices from this domain include:

- Sentara Health System investing in four hours of error reduction/patient safety training for all staff, in every function
- The VA's organizational commitment to patient safety by establishing its National Center for Patient Safety with fifty staff members
- Sharp Healthcare's commitment to creating a Just Culture
- The number and varied nature of forums for sharing patient safety information in the DoD, both horizontally and vertically

Some areas for DoD improvement from this domain include:

- All DoD organizations understand the necessary balance between patient safety practices and risk management. However, only the DoD Patient Safety Program (PSP) has a mixed model where some Navy staff regularly share dual responsibilities between patient safety and risk management. The three benchmark organizations and the rest of the DoD work to keep patient safety and risk management as separate as possible.
- All organizations would benefit from educating providers in standardized patient safety processes and methods. This lack of awareness among providers is one of the factors identified by the Center for Education and Research in Patient Safety (CERPS) as having the greatest impact on event reporting in the DoD.
- DoD would benefit from more openness towards data that is currently de-identified from the facility where events occur to improve transparency.
- DoD would benefit from more accountability of training dollars spent to contract Patient Safety Managers for standardized training by CERPS.

### **IOM Domain: Enhance Patient Safety**

The second functional domain in a comprehensive patient safety program is enhanced patient safety. The six sub-elements in this domain lay out the process by which detection and analysis of events leads to plans to address identified risks, which are tested and then implemented. This process is followed by efforts to sustain positive changes in work systems. The domain also encourages the inclusion of patients and their family/support network in enhancing patient safety. For a complete analysis of DoD event reporting, see the section on Event Reporting in Chapter 5.

Highlighted best practices from this domain include:

- All organizations actively engaged in collecting event-related and near miss data, and in analyzing this data for issues and trends.
- The epidemiologists and natural language processing tools available to the DoD Patient Safety Center for conducting detailed analysis of event data.
- Human factors engineering approaches used by Sentara and the Department of Veteran Affairs (VA) to reduce risks and error proof systems of care.
- The relentless use of metrics at Sharp, and the promulgation of awareness through Patient Safety coaches at Sentara as methods to sustain change.
- The designation of a “Coordinating Physician” who oversees and coordinates each patient’s care at Sentara, and the inclusion of patients who have received less than optimal care at patient safety panels and conferences at Sharp.
- DoD has the ability to conduct automated medication surveillance using MEDMARX® and Pharmacy Data Transaction systems.

Some areas for improvement from this domain include:

- DoD and Sentara do not have system-wide electronic event reporting.
- Most organizations do not have automated surveillance associated with an electronic health record.

## **IOM Domain: Applied Research Agenda**

An applied research agenda is the third functional domain called for in the IOM model. Research is critical to understanding what patient safety issues and risks are present in a health system and to developing and testing appropriate mitigation strategies.

Highlighted best practices from this domain include:

- The VA provides considerable financial support for internal Patient Safety Centers of Inquiry, where research can be conducted to define new approaches to high-risk issues.
- The DoD completes root cause analyses on all sentinel events, and forwards all of these to The Joint Commission for review. It is the only comparison organization to take this extra external review step.
- Sentara Healthcare uses automated tools that aid in the early detection of patient needs by operating extensive algorithms, which automatically monitor patients and identify subtle changes to their condition, sending out alerts for response by Registered Nurses monitoring patients from the e-ICU.
- Sharp Healthcare has used Six Sigma approaches to define specific cost benefits from both Cerner Healthcare information technology applications and Central Pharmacy applications.
- Patients at Sentara Health System have access to a “Promise Line”, where they can request assistance, make complaints, and provide input on care, etc.

Some areas for improvement from this domain include:

- No organization allows patients to input event reports directly into whatever reporting framework they are using.
- Most organizations do not conduct automated surveillance on health records, but all are working to better enhance this capability, especially through electronic medical records.
- While the DoD and the VA use Natural Language Processing (NLP) software to analyze text-based records, other organizations do not. Leveraging these types of software tools could greatly enhance research capabilities.
- Recall procedures are disparate across and even within organizations, and this leads to staff who are sometimes buried under too much recall information, and yet missing critical recall information they need to receive.

## **DoD-Specific Recommendations**

- Incorporate a comprehensive standardized Quality Management and Patient Safety module within and across Services into command training across the MHS to develop an officer and leadership corps deep-rooted with quality and safety.
- Congress should allow DoD, Services, and the MTF Commanders flexibility to apply directed funding and medical resources to the areas of greatest need within the priorities set by Congress.
- Consider making the Quality Management and Patient Safety Managers civilian positions to enhance the stability of the program.
- Develop strategies addressing the continuity of care for beneficiaries as the MTFs expand and contract their capacity to deliver medical care based upon mission demands, particularly around age-related disparities.

- Create a mechanism for Direct Care and Purchased Care clinicians to view data on shared beneficiaries, so that a complete clinical picture can be made for improved preventive health, chronic disease management, and patient safety.
- Initiate a system that would allow the Managed Care Support Contractors (MCSCs) to have full access to pharmacy data to better oversee their disease management programs.
- Modify current federal statute to remove the requirement for the redundant and costly National Quality Monitoring Contractor certification of mental and behavioral health facilities. The facilities are already Joint Commission-accredited.

In summary, DoD compares favorably to the IOM framework and the comparison groups. There are areas highlighted above where DoD Patient Safety management could implement changes and strengthen the program. Some of the recommendations involving agencies outside the authority of the PSP may be more difficult to accomplish.

# Chapter 10: Recommendations and Conclusion

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The following recommendations to improve and strengthen the Quality Improvement and Patient Safety Programs are based on the data collected, evaluated, and synthesized throughout the assessment of the Military Health System (MHS) Medical Quality Improvement Program.

## Recommendations

### Leadership

- Continue to promote a culture of safety and quality from MTF commanders and leaders in which problems, near misses, and errors are reported, discussed, and acted upon without the risk of blame or guilt
- Incorporate a comprehensive, standardized Quality Management module within and across Services into command training across the MHS to develop an officer and leadership corps deep-rooted with quality and safety
- Assign a lead entity that provides clear guidance on Base Realignment and Closure (BRAC) initiatives, specifying which Service should take the lead if the activity involves more than one Service
- Include representation from Force Health Protection and Readiness, the Joint Staff Surgeon's office at the command level, and Navy Fleet and Marine forces on the MHS Clinical Quality Forum

## Resources

### Staffing

- Develop mechanisms to assist MTFs with staffing shortages affecting their quality departments to better manage patient safety and quality monitoring
- Implement a system across Services for reducing the frequency of reassignments (as opposed to deployments) of clinical staff during periods of high operational activities, within the primary mission of national security
- Provide Service Quality Leads with reports that include actual staffing numbers and unfilled positions of key Quality Management, Performance Improvement, and Patient Safety staff
- Consider making the Quality Management and Patient Safety Managers permanent civilian positions to enhance the stability of the program
- Streamline the process for hiring civilian staff to improve the speed and flexibility of filling positions

### Information Systems

- Address the communication discrepancies between the AHLTA leadership perception and the end-users experience using AHLTA. Develop a comprehensive and efficient electronic medical healthcare record for all DoD beneficiaries, including those in the TRICARE and VA systems, as recommended in the Healthcare Quality Initiatives Review Panel report.
- Develop an accessible, interoperable electronic medical record that follows a warrior continuously from the initial site of battlefield triage, through interim care and medical transport to the ultimate treatment site.

- Work with the MHS Population Health Portal team and Services to improve data accuracy, timeliness and interoperability with other systems.

## **Quality and Patient Safety Oversight Management**

### **Quality Management**

- Standardize education, skill development, data collection methods, dashboards for facility reporting, and process improvement methods to be used by all MTFs for performance improvement
- Prioritize required reporting of metrics from MTFs
- Design a template for reporting MTF-specific quality data on their public Web site to ensure reporting quality consistency across the MHS
- Provide staff who can assist MTF-level personnel gain greater expertise in the appropriate collection, analysis, and application of quality data
- Expand communication with facilities on the quality metrics, standards, and definitions developed in the Clinical Measures Steering Panel (CMSP) to promote consistency of quality data reporting across the Services
- To enhance opportunities for “lessons learned”, TMA and Services should ensure the existence of operable mechanisms for obtaining actionable feedback on root cause analyses or patient safety events that have occurred at their or other MTFs
- Assign a full time Quality/Patient Safety Manager to the Command Joint Task Force Surgeon staff to act as a Subject Matter Expert consultant to the theater for quality and patient safety matters. Direct that this person be responsible for coordinating, overseeing, and reporting quality and patient safety issues to the command.

### **Patient Safety**

- Adopt a standard taxonomy for clinical and dental patient safety events including “near misses” that can be shared with Risk Management
- Support the use of a single “closed loop” system for all alerts and advisories, whereby leadership can quickly determine whether the alert or advisory was received and what actions have been taken at each location
- Determine the amount of facility-identifiable data that can be shared with the Patient Safety Center to accomplish complete epidemiological analyses for leadership of the Patient Safety Program and key DoD leaders
- Evaluate the benefits versus costs of establishing permanent Patient Safety Coordinator positions
- Formulate research priorities and set an agenda demonstrating what changes are needed in the practice setting to enhance Patient Safety
- Continue to assess the MTF variability of reporting “near miss” reports, reduce that variability, and encourage the submission of “near miss” reporting at the lowest level of staff

- Reduce Patient Safety events through the use of human factors engineering investigations and the use of simulation centers addressing human factors elements that may be elucidated from root cause analyses or other event reporting
- Transfer existing internal transparency within and across Services down to the MTF level
- Accelerate the diffusion of TeamSTEPPS™ methods to assure program sustainability and mitigate the effects of high facility personnel turnover

### **Credentialing, Peer Review, and Risk Management Recommendations**

- Accelerate implementation of all modules of the CCQAS across MHS
- Provide timely and appropriate training in the use of CCQAS, so that all risk management, peer review, and credentialing functions are performed electronically without duplication.

### **Military Health System Quality Across the Continuum**

- Continue, within the boundaries of federal statute, to work on mechanisms to increase quality transparency, both internally and externally. Solicit end-user feedback in the design and implementation of transparency initiatives.
- Direct MTFs to regularly collect demographic data in their beneficiary population to allow them to customize healthcare and to anticipate issues around beneficiary needs
- Create a mechanism for Direct Care and Purchased Care clinicians to view data on shared beneficiaries, enabling a complete clinical picture for improved preventive health, chronic disease management, and patient safety
- Initiate a system that would allow the Managed Care Support Contractors (MCSCs) to have full access to pharmacy data to better oversee their disease management programs
- Modify current Code of Federal Regulation to remove the requirement for the redundant and costly National Quality Monitoring Contractor certification of mental and behavioral health facilities. The facilities are already Joint Commission-accredited.
- Continue the current performance-based contracts with incentives for the Managed Care Support Contractors (MCSC) that have led to a more competitive and less audit-intensive program

### **General Recommendations**

- Congress should allow DoD, Services, and the MTF Commanders flexibility to apply directed funding and other medical resources to the areas of greatest need within the priorities set by Congress

## **Appendix**

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Appendix A: **HQIRP Panel Recommendations**

Appendix B: **TRICARE Management Activity Committee Charters**

B.1: Scientific Advisory Panel Charter

B.2: MHS Clinical Measures Steering Panel Charter

B.3: MHS Clinical Quality Forum Charter

Appendix C: **National Quality Management Program Special Studies Conducted Between 2001 and 2006**

Appendix D: **VA/DoD Clinical Practice Guidelines**

Appendix E: **Service Patient Safety Program**

Appendix F: **Center for Education and Research in Patient Safety (CERPS) Educational Offerings**

Appendix G: **DoD Patient Safety Program & Best Practice Organizations or Comparison Chart for DoD and Integrated Organizations**

## Appendix A - HQIRP Panel Recommendations

### Background

Cox News Service (1999) published a seven part series of articles that reported graphic and tragic stories of patients in the MHS who had very poor outcomes, including death, from poor care. The articles highlight issues:

- Unlicensed physicians
- Physicians with a history of malpractice
- Physicians who did poorly in school or failed to pass the licensing exam and could not get licensed in the civilian world but could practice in MTFs (one MD failed licensure 18 times another 30 times)
- Physicians whose civilian licenses were revoked or suspended, sometimes in multiple states, who could practice in military hospitals
- Non-physician providers who were poorly supervised
- Revealed hundreds of incidents of alleged malpractice in Army, Navy and AF MTFs
- Failure to report problem MDs to the NPDB
- Feres Doctrine and Military Claims Act bars lawsuits over medical malpractice to active duty personnel.

In response to the information in the articles, the ASD(HA) developed 13 areas for action to address issues identified. Congress consolidated the list of actions to the following nine initiatives:

- Training and oversight of healthcare providers – especially general medical officers
- Consolidation of high-risk, resource intense clinical activities at specified facilities – establish Centers of Excellence for complicated surgical procedures
- Timely reporting of adverse actions affecting healthcare providers to the NPDB (established in Public Law 99-660)
- Licenses and credentialing for all healthcare providers
- Utilization of an annual DoD level quality management report
- Communication with beneficiaries about the quality of their care – to provide comprehensive and objective information about the quality of care provided
- Strengthening of the DoD Quality Management program
- Ensure that all laboratory systems meet professional standards
- Ensure patient data accuracy and information management.

Congress subsequently convened the DoD Healthcare Quality Initiatives Review Panel (HQIRP) from Sept 1999 through Jan 2001 as a Federal Advisory Committee chartered by Congress in Public Law 105-174. Following is a description of this committee

- Panel consisted of nine members and two alternates and contracted staff support.
- \$4.7 million was allocated to this activity with \$4.4 mil to be spent on quality initiatives
- Panel held public meetings, briefings and public comment was invited

- Panel attended Annual TRICARE Conference in 2000
- Panel met individually with Service Surgeons General
- Conducted site visits in four TRICARE Regions

They had a Web site through which they could receive and report information. At the end of their inquiry process, the panel proposed four major recommendations and 44 specific recommendations related to the nine initiatives in their charter. The following are the four major recommendations as well as the 44 specific recommendations grouped by initiative:

1. Implement a Unified Military Medical Command to:
  - a. Achieve stability and uniformity of healthcare processes and resource acquisition.
  - b. Manage an error reduction and safety program based on root cause analysis, system process redesign, responsive resource management, and provider education.
2. Achieve comparability of oversight and accountability across the TRICARE spectrum – including both direct care and purchased care components.
3. Expand and refine credentials management for all healthcare professionals in MHS to:
  - a. Enhance oversight, accountability, and career management (especially education) for such personnel
  - b. Support implementation of and develop experience with a centralized federal interagency credentials repository.
4. Install robust, comprehensive data systems capable of measuring and monitoring quality outcomes, use of resources, and healthcare costs.
5. Upgrade professional education and training requirements for military physicians and other healthcare providers
  - a. Performance expectations for all healthcare providers, military or civilian, should be defined and assessed through an ongoing competency assessment program
  - b. The plans of the Services covering compliance with Congress’s mandate and Department of Defense (DoD) policy memoranda on General Medical Officers (GMOs) should proceed. The Services must ensure that providers assigned have the clinical skills necessary to care for the population served.
  - c. Physicians and other healthcare providers working in isolated situations should receive technological and resource support (e.g. decision support tools, manpower, and adequate financial allocation) in addition to consultation and oversight.
  - d. Appointment and retention criteria, performance expectations, and monitoring should be analogous and comparable for all healthcare providers, whether civilian providers in our purchased care networks or “direct care” providers
  - e. Strategies should be developed to enhance the measurement of performance and the assurance of quality in the “purchased care” sector.
6. Establish Centers of Excellence for complicated surgical procedures
  - a. The current effort to develop a program to designate Centers of Excellence (COEs) within and for the Department of Defense (DoD/Military Health System (MHS) should be aggressively pursued. This program will be based on the criteria created in the Center of Excellence Project.

- b. Pilot testing of the COE designation process, criteria, metrics, and organizational evaluation process should be completed for selected sets of Diagnosis Related Groups (DRGs) on a aggressive timetable.
  - c. A representative forum of significant federal and nonfederal constituencies should evaluate early pilot experience and use the information to facilitate refinement and broader implementation.
  - d. Essential metrics for clinical and administrative COE program elements should be incorporated into DoD/MHS automation initiatives as experience indicates.
7. Make timely and complete reports to the National Practitioner Data Bank (NPDB) and eliminate associated backlogs
- a. Improve the Department of Defense (DoD) Risk Management Program by using an integrated tri-Service process to address cases, perform analysis, and provide coordination with external agency peer review and the Department of Legal Medicine (DLM/Armed Forces Institute of Pathology (AFIP))
  - b. Include Risk Management Program information about actions of significance in the DoD Quality Management Report (QMR)
  - c. Use risk management experience to develop educational products that healthcare professionals and other participants in healthcare services can use to improve safety and reduce risk.
  - d. Use common metrics in reporting aggregated and stratified risk management experience to facilitate comparisons and analysis of trends.
  - e. Modify the DoD Risk Management Program to require a uniform comprehensive process for identification and reporting of practitioners not meeting the standard of care in claims by active duty Service members (Feres-barred cases).
  - f. Require Managed Care Support Contractors (MCSCs) to develop processes for risk management and error reduction that are analogous to those used in the direct care system.
8. Assure that Military Health System providers are properly licensed and have appropriate credentials.
- a. The current direct care system licensure policy promulgated by Department of Defense (DoD) directive should be continued within the context of a dynamic quality management program increasingly based on performance data.
  - b. The Assistant Secretary of Defense for Health Affairs (ASD (HA)) must continue to monitor state legislative initiatives on licensure of healthcare professionals and work with national entities to achieve uniformity of requirements, processes, assessment methodologies, and results.
  - c. The Centralized Credentials Quality Assurance System (CCQAS), the automation platform for credentials management in the direct care system, should be aggressively refined to achieve the following:
    - i. Interface with other federal agency platforms to facilitate functions such as reserve mobilization, comparable performance assessment, and mission-directed rapid reassignment among federal military and nonmilitary clinical facilities;
    - ii. Include meaningful, relevant, supportive clinical data;

- iii. Facilitate timely individual updates for essential data or information fields, such as medical license renewal and continuing medical education content and credit hours; and
      - iv. Offer programmed and ad hoc capabilities for generating reports so that various levels of oversight and management can better manage personnel.
    - d. CCQAS should be tested within a TRICARE region to facilitate better and more comparable credentials review and appointment procedures between the Managed Care Support Contract (MCSC) system and the direct care system.
- 9. Reestablish the Quality Management Report (QMR) to aid in early identification of compliance problems.
  - a. Reestablish and improve the Quality Management Report (QMR) as a:
    - i. Comprehensive information product for communicating with and educating leadership within Congress, the Office of the Assistant Secretary of Defense (Health Affairs) (OASD (HA)), TRICARE Management Activity (TMA), the Services, and the Military Treatment Facilities (MTFs) on the status of quality in the Military Health System (MHS)
    - ii. Framework to position and bridge essential components of the proactive MHS Quality Management Program; and
    - iii. Vehicle to facilitate meaningful, specific comparisons among the Services, the federal agencies, and the civilian healthcare sector, especially in the risk management and patient safety arena.
  - b. Continue to refine the TRICARE Operations Performance Statements (TOPS) program to achieve better automated data support, better data utility for the operational levels of MTF and Regional Lead Agents (senior regional TRICARE administrative function), improved data quality, and better reflection of personnel resources.
  - c. Promulgate a definition of “quality” concerning MHS and TRICARE healthcare and related services that can be used to identify and position data and automation support initiatives in the future. Incorporate the definition into DoD Directive 6025.13, “Clinical Quality Management Program in the Military Healthcare System.”
- 10. Improve communication with beneficiaries to provide comprehensive and objective information on the quality of care being provided
  - a. Maintain and continue to improve the Military Treatment Facility (MTF) report cards so that they provide meaningful information to beneficiaries. Further, through communications with beneficiaries, continue to identify those markers of quality of care that the beneficiaries determine should be measured on the MTF report card.
  - b. Maintain and continue to improve the provider directories so that they furnish meaningful information to beneficiaries
  - c. Maintain and continue to improve the Healthcare Consumer Councils (HCCs) so that they provide a forum for a meaningful dialogue to connect beneficiaries with both the providers and the administrators of their healthcare. Tracking and resolution of identified issues should be a significant agenda item.
  - d. Make the benefit and benefit administration uniform across the TRICARE spectrum, including the direct care and purchased care components.

- e. Continue to develop initiatives to improve communication with beneficiaries and to enhance their education on healthcare quality issues.

#### 11. Strengthen the National Quality Management Program

- a. Update Department of Defense (DoD) Directive 6025.13, “Clinical Quality Management in the Military Health Services System,” and include a definition of quality for TRICARE clinical healthcare and related services to orient current and future measurement initiatives.
- b. Implement a uniform resourcing methodology to allow integration of resource management data and analysis into quality management processes
- c. Incorporate the National Quality Management Program (NQMP) external review of healthcare products into the audit and feedback process for improvement of healthcare and related services across the TRICARE spectrum.
- d. Continue to use an external peer review agency for malpractice case reviews.
- e. Support and expand interagency collaboration in forums such as the Quality Interagency Coordination Task Force (QuIC) to leverage knowledge and resources for improving healthcare quality within the federal system and across the nation.

#### 12. Ensure that all laboratory work meets professional standards.

- a. Consolidate cytopathology centers across the Military Health System (MHS).
- b. Develop supportive “production-based” (reportable test) staffing models to ensure uniform adequacy of staff levels and ongoing training across all clinical laboratory disciplines.
- c. Use the Centralized Credentials Quality Assurance System (CCQAS) to enhance the management of credentials of all laboratory professionals, whether officer, enlisted, contract, or civil service.
- d. Require that clinical laboratory personnel hold and maintain qualification analogous to those of their colleagues in the civilian sector.
- e. Require that military personnel should meet federal standards; civil service and civilian contract personnel should meet the higher of Federal or local jurisdictions standards.

#### 13. Ensure the accuracy of patient data and information

- a. Move forward rapidly with development and implementation of the Composite Health Care System, Second Implementation (CHCS II) to provide more comprehensive, efficient electronic medical record support for all Department of Defense (DoD) beneficiaries.
- b. Continue as planned to enhance, and ultimately absorb, the Composite Health Care System, First Implementation (CHCS I) into CHCS II through phased implementation of CHCS II.
- c. Ensure that appropriate analytical and ad hoc reporting capabilities are available for CHCS II data to provide pertinent assessment information for management at all levels within and across the military Services and for all healthcare settings of the military.

- d. Ensure that a longitudinal electronic health record exists for active duty military personnel, maintained through a global capability to link pertinent information data bases available for peacetime and deployed operations.
- e. Participate actively in national and federal interagency policy and data standards development activities with organizations such as the National Committee on Vital and Health Statistics.
- f. Plan, program, budget, and fully fund business process reengineering resource requirements to facilitate full implementation of the MHS Optimization Plan and Force Health Protection.
- g. Strategic goals must be established to progressively enhance “connectivity” with Computerized Patient Records (CPRs) generated by managed care network providers and other providers not in the direct care system. When feasible, such integration must support common (uniform) data quality standards, data aggregation, audit, and robust analytical and report generation capabilities.

# Appendix B: TRICARE Management Activity Committee Charters

## Appendix B.1: TRICARE Management Activity Committee Charters - Scientific Advisory Panel Charter

The Scientific Advisory Panel (SAP) serves as the oversight board for DoD special clinical study. The studies are designed to analyze and compare the performance of DoD to civilian national benchmarks whenever available. An external organization supports the study process to ensure valid, unbiased analysis and reports. Primary responsibilities of the Panel include:

- Identify and select topics for special clinical studies that are aligned with the strategic direction of the MHS and clinical needs of the beneficiaries
- Provide guidance and make recommendations on the design and methodology for the special studies to ensure they are scientifically sound
- Provide ongoing information on the status and results of the special studies to Service and HA/TMA leadership
- Facilitate the linkage between clinical outcomes and MTF performance by communicating study findings and recommendations to the appropriate facilities and personnel in the MHS
- Advocate for improved performance as opportunities are identified by the studies findings

### Membership

The members of the SAP are appointed by TMA and individual Services. Each member is responsible for communicating the activities of the Panel to their Service leadership and subject matter experts as appropriate. The members are empowered to represent their organization. The primary member for each Service should be appointed through their respective Service. Additionally, non-voting TMA/Service and contractor representatives may be appointed by the primary TMA/Service representatives with concurrence of the Chairperson of the Panel to support the Panel.

In the event a principal committee member is unable to attend the scheduled meetings, an alternate representative shall be appointed and empowered to represent their organization. Should the primary member be unavailable for a period of 90 days or longer, replacement shall be appointed. Primary members served at the leisure of their Service and may be replaced should higher priority Service specific tasks arise.

### Panel Members:

1. TMA Office of the Chief Medical Officer Representative – Chairperson
2. Service representatives from the Army, Air Force, and Navy with interest and expertise and clinical research
3. HA representatives with interest and experience in clinical research
4. Health Plan Analysis and Evaluation representative with interest and experience in clinical research
5. Population Health Support Division Representative

## **Support Personnel**

1. MHS staff consultants approved by the Panel members with interest and expertise in clinical research and/or data analysis or with expertise in a clinical area of interest. A recognized expert in the field of study should be appointed by the Chairman as a champion for each special study.
2. Contractor project manager and researcher with expertise and clinical research and data analysis.

## **Meetings**

The Scientific Advisory Panel generally meets on monthly basis. The meeting

1. Date: Second Thursday of the month
2. Time: 9:00 to 12:00. (EST).
3. Location: Skyline Complex at Falls Church, Virginia. Teleconference/video linkage is available to facilitate maximum participation of Panel members and support personnel.

Meeting time and date may be change based on a consensus of the members and concurrence of the Chair.

Meeting oversight is the responsibility of the Chairperson. The coordination and documentation of the meeting is provided by the contractor with guidance and direction from Chairperson. Meeting materials for the SAP will be located on the MHS quality Web site.

## **Reporting**

The Scientific Advisory Panel provides a semiannual report to the TRICARE Clinical Quality Forum (MHS CQF). Additional reports to the TRICARE Clinical Quality Forum may be scheduled if needed per the request of the Chairperson.

Reviewed by SAP and Submitted by:

Chair, Scientific Advisory Panel

Approved

Chair, TRICARE Clinical Quality Forum

## **Appendix B.2: TRICARE Management Activity Committee Charters - MHS Clinical Measures Steering Panel Charter**

The Clinical Measures Steering Panel (CMSP) is a Military Health System (MHS) collaborative committee including Service and HA/TMA representatives with responsibility for providing guidance for MHS clinical quality measures initiatives and the overall direction of the DoD Joint Commission ORYX® activities. Clinical quality measures monitored in the MHS are based on nationally recognized measurement systems. The MHS Portal provides health plan measures that are consistent with the National Committee on Quality Assurance (NCQA) Health Plan Employer Data and Information Set (HEDIS®) and includes both process and outcome measures. ORYX® focuses on integrating process and risk-adjusted outcomes performance measurement data into the accreditation process for inpatient facilities.

### **Goals**

1. To promote clinical quality across the MHS in alignment with the strategic plan
2. To prevent possible causes of medical error through the use of measurement
3. To utilize a variety clinical quality measures to continually assess the care provided across the system and at each level of the organization.
4. To align with the national movement as it moves toward healthcare quality consensus measure development and comparison
5. To ensure the MHS remains in the forefront of healthcare quality measurement by seeking current information on clinical measures that are used to improving clinical quality

### **Responsibilities**

Primary responsibilities of the Panel include:

1. Provide recommendations for selection, collection, and analysis of MHS clinical quality measures
2. Provide oversight of the monthly collection of raw data from medical records and centralized databases
3. Monitor the Joint Commission quarterly report submission process ensuring MTF access to facility specific download data from the host secure Web site.
4. Consolidate MTF data for a DoD corporate view
5. Facilitate MTF actions and improvement efforts for measures that are less than the national benchmark
6. Communicate the analysis of the data to MHS leadership through the MHS Clinical Quality Forum

### **Membership**

The membership of the CMSP consists of healthcare providers and experts in the field of clinical quality and performance improvement appointed by TMA and the individual Services. Each member is responsible for communicating the activities of the panel to their Service leadership and subject matter experts as appropriate. The members are empowered to represent their organization. The primary member for each Service should be appointed through their respective Service. Additionally, non-voting TMA/Service representatives may be appointed by the primary TMA/Service representatives with concurrence of the Chairperson.

In the event a principal panel member is unable to attend the scheduled meetings, an alternate representative shall be appointed and empowered to represent their organization. Should the

primary member be unavailable for a period of 90 days or longer, replacement shall be appointed. Primary members served at the leisure of their Service and may be replaced should higher priority Service specific tasks arise.

### **Panel Members**

1. TMA Office of the Chief Medical Officer Representative – Chair
2. Service representatives from the Army, Air Force, and Navy with interest and expertise Joint Commission ORYX® and clinical quality measures
3. HA/TMA/TRO representatives with interest and experience Joint Commission ORYX® and clinical quality measures
4. Population Support Division Representative with expertise in the Portal clinical quality measures
5. Health Information Advisory Panel (HIMAP) Representative
6. Scientific Advisory Panel Representative

### **Support Personnel**

1. MHS staff consultants approved by the panel members with interest and expertise in Joint Commission ORYX® and clinical quality measures
2. Contractor project manager and staff with expertise in Joint Commission ORYX® and clinical quality measures

### **Meetings**

The Clinical Measures Steering Panel generally meets on monthly basis. The meeting

1. Date: Third Tuesday of the month
2. Time: 1:00 pm to 3:00. (EST).
3. Location: Skyline Complex at Falls Church, Virginia. Teleconference/video linkage is available to facilitate maximum participation of committee members and support personnel.

Meeting time and date may be changed based on a consensus of the members and concurrence of the Chair.

Meeting oversight is the responsibility of the Chairperson. The coordination and documentation of the meeting is provided by the contractor with guidance and direction from Chairperson. Meeting materials for the CMSP will be located on the MHS quality Web site.

### **Reporting**

The Clinical Measures Steering Panel provides a semiannual report to the TRICARE Clinical Quality Forum. Additional reports to the TRICARE Clinical Quality Forum may be scheduled if needed per the request of the Forum Chair.

Reviewed by CMSP and Submitted by:  
Chair, Clinical Measures Steering Panel

Approved  
Chair, TRICARE Clinical Quality Forum

## **Appendix B.3: TRICARE Management Activity Committee Charters - MHS Clinical Quality Forum Charter**

### 1. Mission Statement:

The MHS Clinical Quality Forum is a collaborative committee sponsored by OASD (HA)/TMA with oversight responsibility for clinical quality assessment across the TRICARE Military Health System. The Forum's primary responsibilities are to continually monitor key performance indicators and evaluate the quality of healthcare provided to Department of Defense beneficiaries. Healthcare quality will be assessed based upon relevant clinical performance improvement indicators of healthcare system performance, beneficiary and stakeholder perceptions of the quality of healthcare, and activities focusing on quality assurance/risk management parameters. The Forum will provide ongoing updates and recommendations to senior leadership.

### **1. Membership:**

The Committee membership includes representation from:

1. Deputy Chief Medical Officer, OASD (HA)/TMA
2. Director, Clinical Quality Division and Medical Director, OASD (HA)/TMA
3. Senior Clinical Quality Leader of the USA
4. Senior Clinical Quality Leader of the USAF
5. Senior Clinical Quality Leader of the USN
6. Director Quality, TRICARE Regional Office North
7. Director Quality, TRICARE Regional Office South
8. Director Quality, TRICARE Regional Office West
9. Program Director, Dental Clinical Quality, Dental Care Division, OASD (HA)/TMA
10. Director, DoD Patient Safety Program/Director, DoD Patient Safety Center, AFIP
11. Director, Office of Strategy Management, HA
12. Director, Population Health and Medical Management Division, OASD (HA)/TMA
13. Program Manager, National Quality Management Program, Clinical Quality Division, OASD (HA)/TMA
14. Deputy Director, Network Performance Assessment and Improvement, Clinical Quality Division, OASD (HA)/TMA
15. Deputy Director, Health Programs Analysis & Evaluation, OASD (HA)/TMA
16. Program Director, Patient Advocacy and Medical Ethics, OASD (HA)
17. Representative, Department of Legal Medicine, Armed Forces Institute of Pathology, USA
18. Director, Program Integrity, Acquisitions Management Support Directorate, OASD (HA)/TMA
19. Representative, DoD/DVA Evidence-Based Practice Workgroup, USA
20. National Quality Monitoring Contract Program Manager, Operations Directorate, OASD (HA)/TMA
21. Program Manager, Clinical Quality, Direct Care System, Clinical Quality Division, OASD (HA)/TMA

22. Deputy Director, Deployment Health Directorate, OASD (HA)/TMA
23. Chair, TMA Scientific Advisory Panel
24. By invitation and based on agenda Military Health Support Contract and US Family Health Plan Quality Representatives

## **2. Associated TMA/HA Supporting Functions/Committees:**

1. DoD Risk Management Committee
2. TMA Medical Director's Forum
3. TMA Scientific Advisory Panel
4. MHS Clinical Measures Steering Panel
5. DoD Patient Safety Planning and Coordination Committee

## **3. Day, Time, and Structure of Meetings:**

1. Meetings are held monthly on the fourth Wednesday of each month from 1300-1500 Eastern Time.
2. Extra meetings may be called at the discretion of the Chair.
3. The member or alternate is expected to attend the meeting. In the rare incident when this is not possible, contact the meeting coordinator for update on meeting.
4. Members may attend the meeting in person, by video teleconference (VTC) or by telephone.
5. Decisions and recommendations from the Forum will be made through consensus. If a situation arises when consensus is not possible, a summary of the topic and issues will be forwarded to the Clinical Steering Proponency Committee.

## **4. Specific Functions:**

1. Identify the key quality indicators in the MHS used to assess the quality of care provided to our beneficiaries
2. Gather and analyze information on the quality of healthcare provided in the MHS
3. Formulate recommendations to TMA/HA leadership based on the analysis of MHS specific quality initiatives including the development of new initiatives and elimination of others
4. Disseminate quality information throughout the MHS to advocate adoption of best practices
5. Review DoD policies, instructions, or directives pertaining to clinical quality oversight and make recommendations for modification of such policies, instructions, or directives
6. Provide advice on content and editorial feedback for the annual DoD Quality of Healthcare Report submitted by the Assistant Secretary of Defense (Health Affairs) to Congress

## **5. Reporting Responsibilities:**

1. Monthly meeting minutes will be completed and submitted to the Deputy Assistant Secretary of Defense for Clinical and Program Policy for review
2. Recommendations from the Forum will be submitted through the Deputy Assistant Secretary of Defense for Clinical and Program Policy to the Clinical Steering Proponency Committee for decision and implementation

3. A semi-annual summery report to the Clinical Steering Proponency Committee of quality information from the Forum activities
4. An annual report on the quality of healthcare provided by the DoD submitted through TMA to the OASD (HA) and forwarded to Congress in September of each fiscal year

Reviewed by TRICARE Clinical Quality Forum:

Chair, TRICARE Clinical Quality Forum

Approved by Clinical Proponency Steering Committee:

Chair, Clinical Proponency Steering Committee

## Appendix C: National Quality Management Program Special Studies Conducted Between 2001 and 2006

		Study Findings
<b>Asthma</b>	2001	<p>Asthma Care in the MHS</p> <p>DoD/DVA CPGs for asthma were developed, including four recommendations for system-wide monitoring - monitor the percentage of pts with appropriate long-term medications. Rates reported by demographics, duty status, and organizational level.</p>
	2002	<p>Asthma Care - Appropriate Use of Medication in the MHS</p> <p>Measure the use of long-term controller medications in the management of persistent asthma (HEDIS measure).</p>
		<p>Results: Rates of appropriate medication were very high in the MHS, with more than 80% of persistent asthmatics receiving appropriate med. Rec: pop geographically concentrated in TRICARE regions 1,2,3, and 6. This is an area of future study. Investigate the result that AD may be receiving appropriate therapy at a lower rate than the NAD. Continue monitoring asthma medication prescription patterns for future trending.</p> <p>Findings: Controller med usage rates for NAD persistent asthmatics ranged from 43-54%. Use of appropriate controller med by AD persistent asthmatics ranged from 35-42%. Stratified by Services. Prior appropriate med: Navy best, army worst (4% diff) ED visits by prior appropriate med: navy fewer visits, army higher. Among beneficiaries with a hospitalization for asthma, 4% received long-term controller medication prescription for asthma prior to hospitalization. Among beneficiaries with ED visit, 8% beneficiaries received a long-term controller med prescription for asthma prior to the visit. UM: 7 admissions per 10,000 MTF enrolled benes. Inpatient and emergency department (ED) visits higher in Army than AF. Overall Rate compared favorably with HP 2010. ED visits 49 per 10,000 enrollees.</p>

		<b>Study Findings</b>	
	2003	Asthma Care in the MHS	Provide a comprehensive description of asthma prevalence, medication treatment, and health service utilization for benes using MTF for asthma care.  Findings: Asthma prevalence 2.4%, Higher in the 5-9 year group (6.8%) Beta-2 agonists prescribed to the largest proportion of the study population. 17% of benes had an ED visit. 67% had Outpatient visits within 14 days of ED visit; 89% for hospitalized population. Beta-2 agonist and inhaled corticosteroid prescriptions may play a role in preventing ED visits.
<b>Birth Trauma</b>	2005	Birth Trauma Evaluation of Patient Safety Indicator 17	Birth trauma rate FY04 20.75/1000 in MTFs (administrative data) compared to AHRQ benchmark of 6.34/1000.  Variation across and within services: 3 Army MTFs accounted for over 53% of all Army MTF trauma; 3 Air Force MTFs accounted for over 54% of all Air Force MTF trauma; 3 Navy Medical Centers accounted for 62% of all Navy MTF traumas. In all, 7 MTFs (12.3%) had birth trauma rates higher than the AHRQ benchmark. Recommendations: Implement ongoing obstetric coding audits across all MTFs delivering babies and, based on findings, establish system-wide training program to elevate coding proficiency to 100% accuracy.
<b>Blood Pressure</b>	2004	Blood Pressure Measurement in the Direct Care System	Determine the blood pressure screening rate in MHS DCS outpatient facilities  Blood pressure screening was 95% or higher for fixed facilities and 88% from afloat and Battalion Aid Stations. BP screening appeared to also be proxy for other health care and clinical screens; For AD benes, documentation of BP measurement ranged from 92% at Army facilities to 98% at Air Force. For NAD, documentation of BP ranged from 98% (Army and Air force) to 99% Navy. Conclusions: MHS benes receive timely BP measurements during out-pt visits in DCS. Where BP measurements were less, so too were documentation of ht, wt, co-morbid conditions and health counseling.
	2006	High Blood Pressure	Studied the process of care of hypertension (HtN) in the MHS DCS. 1. For out patient visits are BP measurements among hypertensive TRICARE Prime within  Findings: 49.6% had elevated BP, 50% had documentation of diet counseling/referrals, 46% had documentation of exercise counseling/referrals. Potential questions for audit review: documentation of behavior modification counseling, such as diet, exercise and blood pressure monitoring for hypertensive patients. Study did not stratify by Service.

		Study Findings	
			normal range. 2. Is patient counseling and education focused on lifestyle and medication? 3. What antihypertensive meds are prescribed? 4. What are demographic and clinical characteristics of TRICARE beneficiaries being treated for HtN.
<b>Breast Cancer (screening)</b>	2001	Breast Cancer Screening in the Military Health System	To estimate and compare rates of breast cancer screening within the MHS.
	2002	Breast Cancer Screening in the Military Health System	Determine the breast cancer screening rates for women continuously enrolled to an MTF by enrollment site
<b>Cervical Cancer (screening)</b>	2001	Cervical Cancer Screening in the Military Health System	To test the effectiveness of a cervical cancer screening policy w/ CDC and USPSTF recommendations.
	2002	Cervical Cancer Screening in the Military Health System	To assess the Pap testing rate for women enrolled in an MTF and compare rates with health plans reported in HEDIS.
			MHS should continue to monitor screening using this study as a baseline; MHS screening rates met HP 2010 goals however, rates were below TRICARE goal.
			Mammography varies significantly by Military Services, ranging from 77% (Army MTFs) to 81% (Air Force). Monitor mammography rates at all levels within the MHS. Setting goals for the MHS that include attaining similar mammography rates for all women ages 52 - 69.
			The 3-year Pap screening rate in the MHS and Non-Active Duty are lower than the HEDIS average. The Active Duty (AD) population has a yearly requirement for screening, while the Non-Active Duty (NAD) population recommendation for screening is every 3 years. There is variation among the (3) Services (Air Force, Army & Navy) in screening rates. There are differences in screening rates for Active Duty & Non-Active Duty enrollees.
			Pap testing rates are still below the HEDIS 2001 90th percentile. There is not continuous MHS monitoring of screening and no reporting of changes (positive and negative) at all levels.

				Study Findings
<b>Chlamydia (screening)</b>	2002	Chlamydia Testing for Females Enrolled to Military Treatment Facilities	To test the effectiveness of a Chlamydia testing policy w/ CDC and USPSTF recommendations among sexually active adolescents & adults.	Chlamydia testing rates among MTF enrollees and non-active duty MTF enrollees ages 16-20 & 21-26 are below the 2001 HEDIS 90th percentile. Older women have a lower testing rate than younger women.
	2005	Clinical Practice Guidelines (CPG)	Develop a questionnaire evaluating the use of clinical practice guidelines	Identified specific questions, recommend implementing survey after completing TMA survey approval process.
		2006	Clinical Practice Guidelines (CPG)	Evaluate level of implementation of the CPGs in the Direct Care System.
<b>Depression (treatment)</b>	2002	Depressive Disorder Treatment	(1) Obtain baseline measurement rates for metrics dev with major Depressive Disorder CPG (2) Measured Antidepressant Medication Management using HEDIS 2002 (MHS rates compared to civilian managed care programs)	1) Conduct a f/u study on guideline adherence 1 yr after implementing the CPG. 2) Conduct a f/u study that includes CPG Detection and CPG effectiveness/outcome measures. 3) Study reasons for low rate of Optimal Practitioner Contacts
	2004	Depression Co-morbidity	Summarizes 12 month rate of prior co-morbidity with dx of depression & received care in the MHS	Suggestions: Evaluate co-morbidity that follows a dx of depression; evaluate the contribution of co-morbidity, especially mental health co-morbidity, on receiving a depression screen, depression management outcomes,

		<b>Study Findings</b>	
			and prognostic outcomes.
<b>(detection)</b>	2004	Depression Detection	Summarizes baseline screening rates for depression by Direct Care System primary care providers.
<b>(prevalence)</b>	2004	Depression Prevalence in the Military Health System	Determine the prevalence of diagnosed depression in the MHS. Included population of MHS beneficiaries eligible for care on 1/1/04 and w/new episode of depression in 2003.
<b>(postpartum)</b>	2006	Postpartum Depression (PPD)	Evaluated 12-month rate of PPD during CY04 using claims data, no epidemiological data was obtained.
<b>Diabetes</b>	2001	Diabetes Mellitus Care in the MHS	Looking at the following HEDIS criteria (and compared to HEDIS 90th percentile & Healthy People 2010): HbA1c testing compliance, HbA1c control, LDL
			<p>Recommendations: 1) Formal procedures in PC settings to further incorporate depression screening in clinical routine and increase documentation of screening in the medical records. 2) Identify factors of those MTF with high rates and share across DoD. Findings reported by demographic and MTF for AD/G/R/NAD</p> <p>The 12- months prevalence rates of depression diagnoses were: Non-Active Duty (3.87%), Active-Duty (1.93%), and Guard/Reserve (1.54%) beneficiaries.; Mental Health Specialty Care (MHSC) during depression acute phase greater for AD (57.79%) and for National Guards and Reserves (G/R) (48.88%) than for NAD (31.74%). Younger age associated with more likelihood of acute phase MHSC. Lowest rates for AD and G/R noted for those in the Air Force. Rate of antidepressant medication management in acute phase of depression treatment higher for NAD (53.58%); compared to AD (37.5%) and G/R (35.38%).</p> <p>Conclusions: Likelihood of MHSC and antidepressant med tx varies by duty status, demographics, Services and care characteristics.</p> <p>Found 3.0% PPD among AD and 2.7% among NAD beneficiaries.</p> <p>Lack of epidemiological data weakens the findings and limits comparisons. Therefore, the findings cannot be compared to reported rates in civilian populations (10% - 15%) and military samples (19%).</p> <p>RESULTS: All results met or exceeded goals except Army's glycemic control and lipid testing compliance for all services. A trend was found that male patients had higher rates of testing and control.</p>

		<b>Study Findings</b>	
		testing compliance, LDL control, eye exam compliance. (HEDIS specifications modified)	
	2002	Diabetes Mellitus Care in the MHS	<p>Retest of the 2001 study with the ADDITION of the micro albumin test compliance measure and expanded eligibility criteria for MTF beneficiaries (continuous enrollment instead of retrospective and patients taking insulin and oral agents were eligible)</p> <p>RESULTS: those measures below HEDIS 50th percentile were HbA1c testing compliance, LDL testing compliance, and micro albumin testing compliance. Those measures at or exceeding the HEDIS 50th percentile were (only one) HbA1c control. Those measures that were at or exceeding the HEDIS 75th percentile were (only one) LDL control. Those measures that were at or exceeding the HEDIS 90th percentile were (only one) eye examination compliance. **Changed comparison criteria, the results cannot be compared between 2001 and 2002, so the results here-in stand alone.</p>
<b>Dyslipidemia</b>	2002	Dyslipidemia in the MHS	<p>Measured baseline adherence to the VHA/DoD CPG for the Management of Dyslipidemia in Primary Care prior to implementation.</p> <p>Results: care for benes in the DCS with dyslipidemia compares favorably with other health plans, differences in the health care benes with dyslipidemia received based on duty status and gender. Screening and control rates 72% and 61% respectively. Navy had high screening rate and AF highest control rate. Army had lowest screening and control for audit: Army look at screening and control, Navy control, AF screening.</p>
<b>Heart Disease</b>	2003	Ischemic Heart Disease in the Military Health System	<p>Provided baseline beta-blocker (BB) medication information for MHS benes discharged with new acute myocardial infarction (AMI) from both MTF and Managed Care Support Contractor (MCSC) hospitals.</p> <p>Network filled BB - 60.8% vs. MTF filled BB at 76.3%.  Other Results: Med record abstraction + admin data for MTF showed rate of 97% vs. admin data alone of 76.3%  Air Force - biggest gap (27.38% difference in rates) between the two data collection methodologies.  Conclusion: MTF rates from combined admin/Med record data compare to HEDIS 90th percentile  Recommendation: Conduct data study for assessments where documentation is known to be an issue. Monitor the implementation of the Comprehensive Cardiovascular Program and compare multi-year BB rates.</p>

		<b>Study Findings</b>	
<b>Heart Failure</b>	2005	Heart Failure	To determine if the use of discharge instructions effect heart failure hospital readmissions.  Documentation of discharge instructions based on premise that patient's self-management skills are important in preventing HF (heart failure) exacerbation. "Documentation" that discharge instructions have been given does not necessarily mean that a patient has adequate self-management skills. Patient's self-management skills are promoted in Home Care and Heart Failure Specialty Clinics. Thus, comparing hospital readmission rates between patients that were discharged to Home care, or Heart Failure Specialty Clinics vs. patients that are not might be more effective in determining whether these might be best practices that prevent HF hospital readmissions.
<b>Hypertension</b>	2004	Prevalence and Medication Management of Hypertension in the MHS	1) Prevalence of diagnosed hypertension among adults eligible for TRICARE 2) Identify clinical correlates and course of care among hypertensive beneficiaries for visits to MHS DCS facilities  Findings: Overall, 15% of study population had a diagnosis of hypertension. One in five beneficiaries with a diagnosis of hypertension did not have a paid prescription for any of the select antihypertensive medications. Not stratified by service.
<b>Immunization (childhood) (adolescent)</b>	2002	Childhood Immunization (IZ) in the MHS	RESULTS: IZ that met or exceeded Health People 2010 baseline criteria were DTP in the Air Force only, MMR all services, and Varicella all services; all other IZ rates were below 2010 baseline; Hib and Hep B showed the least favorable results
	2003	Adolescent Immunization In the MHS	RESULTS: looking only at Health People 2010 (CDC) baseline rates: Hepatitis B exceeded HP 2010 baseline, Varicella has some confounders so while only 11.39% of subjects rec'd vaccine those with disease-mediated immunity raised the level of population immunity to an estimated 90% (hence comparing this measure to HP 2010 did not have much value), TD and MMR below baseline HP 2010

		<b>Study Findings</b>	
<b>Obesity</b>	2003	Prevalence of Obesity in the Direct Care System	Measured prevalence of obesity, blood pressure screens, counseling, and co morbid conditions for beneficiaries who receive care at a MTF  Findings: 19% adolescents 12-19 years were obese. 34% of NAD adults 20-64 years were obese, 13% of AD were obese. Education, counseling and/or referral for diet/nutrition were recorded for 30% of benes. Education, counseling and/or referral for fitness/exercise were present for 30% of benes.
<b>Post-Deployment Health</b>	2002	Post-Deployment Health Care Evaluation and Management in the MHS	Examine following measures for identifying health conditions among all benes with deployment related concerns for uniform implementation: 1) Implementation at MTF PCC 2) Implementation in the Outpatient Record 3) Implementation electronically in Standard Ambulatory Data Record (SADR)  Recommendations: 1) Monitor MTF CPG implementation for a 2d yr, focus on sites that did not implement in '02. 2) Examine available electronic data to evaluate prevalence, distribution and timeliness of treatment for post-deployment concerns. 3) Evaluate the difference in dx code use as a primary and secondary diagnosis at high volume MTFs
	2003	Post-Deployment Health	1) Measure time to completion of PCC & spec referrals on Post Deployment Health Assessment Form 2) Describe health conditions associated with deployment 3) Examine PDH CPG implementation at MTFs not included in FY02 study  Recommendations: 1) Any f/u to referral completion should capture sufficient detail to confirm referral completion, determine that the referral was unnecessary or confirm that the condition generation the referral was treated. 2) Chain of events that make up the referral process should be examined to identify steps that will facilitate referral completion and create shared responsibility between indiv and the health care system. 3) Any future study of the PDH CPG should change focus to compliance with its recommendations and the quality of care it creates.

		<b>Study Findings</b>	
	2004	Post-Deployment Health Care Screening & Evaluation in the Direct Care System	<p>1) Measure deployment related concern screening in Direct Care System</p> <p>2) Measure deployment related concern detection in the DCS</p> <p>3) Describe the process of care for beneficiaries with a deployment related concern</p>
<b>Prehypertension</b>	2004	The Rate of Prehypertension in the Direct Care System	<p>Identifying the rate of prehypertension amount adult, what is the rate of prehypertension among adult TRICARE Prime/Plus enrollees who receive care in the MHS DCS outpatient facilities?</p>
	2005	Prehypertension	<p>To examine the status of new hypertension diagnoses and healthcare utilization within the Military Health System (MHS) Direct Care System (DCS) as they relate to the new blood pressure category of prehypertension.</p>
			<p>Medical Record data suggests area for concern. DOD should examine levels of hypertension amount AD beneficiaries, given 5% diagnosed hypertension and 51% prehypertensive.</p>
			<p>Recommendations: Screening should be increased throughout the DCS; with emphasis on screening AD. MTFs with little or no documentation should review their operations to ensure that screening is incorporated into routine primary care clinics and that screening is documented in the Outpatient MR.</p>
			<p>Approximate 3% had new HTN diagnosis within 1 year, but more common in normotensive cohort than prehypertensive cohort. Recommendations: 1. Ensure clinicians work to instruct patients to improve lifestyle and BP control. 2. Actively involve patients their care and motivate to comply 3. Fund, develop, implement, and reinforce community-based interventions and programs addressing diversity.; New HTN diagnoses were more common in the normotensive group than in the prehypertensive group.</p>

		Study Findings	
<b>Prenatal Care</b>	2006	Prenatal Access to care	<p>Evaluated 1st trimester visit for all Benes with delivery discharge date in CY04</p> <p>One-third women with MTF deliveries failed to have a documented prenatal visit during 1st trimester (majority were not enrolled in TRICARE Prime). Opportunities exist to market access to early prenatal care in the DCS; 1st trimester visit for all Benes with delivery discharge date in CY04: 59.8% of all MTF deliveries had 1st trimester visit, 68.2% active duty, 58.7% non-active duty; lowest in Air Force (52.97%); Army 61.87% and Navy 60.92%), younger age (35.27% under 18, 53.23% 18-21 and over 60% in older groups) and not enrolled (46.82% versus 64.72% in enrolled group)</p>
<b>PTSD (Screening)</b>	2005	Post-Deployment PTSD Screening	<p>Recommendations: Findings should be viewed as preliminary with future studies needing to provide the Service Member, PDHA assessor, and system based explanations for observed screening and referral rates. More focused studies performed at the point of assessment to determine the content and outcomes of PDHA encounters. Efforts to improve post deployment PTSD care might target recently deployed SM, especially those returning Iraq, and potentially vulnerable subgroups of military personnel.</p> <p>1) Describe brief PTSD screening results obtained from pre-clinical post-deployment health assessments among returning military personnel (both Active and Guard &amp; Reserve) 2) Describe the relationship of pre-clinical brief PTSD screening results to PDHA mental health referral recommendation.</p>
<b>Tobacco Use (Cessation)</b>	2002	Tobacco Use Cessation	<p>Prevalence of smoking among military personnel about 29%. 19% of survey respondents reported to be current smokers with 14% reporting daily use of cigarettes. Smokers not advised to quit were less than 35 yrs of age. Smokers not advised to quit included larger proportions of African Americans, Hispanics and Pacific Islanders.</p>

## **Appendix D: VA/DoD Clinical Practice Guidelines**

### **Cardiovascular**

Chronic Heart Failure (CHF) Update Scheduled  
Hypertension (HTN)  
Ischemic Heart Disease (IHD)  
Dyslipidemia (LIPIDS)

### **Deployment Health**

Medically Unexplained Symptoms: Chronic Pain & Fatigue  
Post-Deployment Health Evaluation & Management

### **Endocrine**

Diabetes Mellitus (DM)

### **Genitourinary Tract**

Pre-End-Stage Renal Disease (ESRD) Update in Progress  
Dysuria

### **Mental Health**

Major Depressive Disorder (MDD) Update Scheduled  
Post Traumatic Stress Disorder (PTSD)  
Psychoses (PSYCH) Update in Progress  
Substance Use Disorder (SUD)

### **Musculoskeletal**

Low Back Pain (LBP) Update Scheduled

### **OB/GYN**

Uncomplicated Pregnancy (UCP) Update in progress

### **Pain**

Opioid Therapy for Chronic Pain  
Post Operative Pain Update Scheduled

### **Pulmonary**

Chronic Obstructive Pulmonary Disease (COPD)  
Asthma

### **Rehabilitation**

Stroke Rehabilitation

### **Other**

Biological, Chemical, and Radiation Induced Illnesses, Blast & Explosions  
Gastroesophageal Reflux Disease (GERD)  
Management of Tobacco Use  
Obesity  
Disease Prevention  
Amputation In progress  
Traumatic Brain Injury In progress

## Appendix E – Service Patient Safety Program

			Air Force <sup>3</sup>
<p><b>Organization</b></p>	<p>The Army PS Program resides at MEDCOM, San Antonio, TX. Staff includes the Program Manager, 7 contract staff, 2 nurses for clinical consulting, dental consultant who is a nurse, 1 DB admin, and 2 data analysts and 1 admin assistant. In process of contracting for two additional staff: Two nurses (PhD as PM and MS).</p> <p><b>Budget:</b> two sources; TMA (3.2M annually) and MEDCOM: TMA funds the PS Managers for the facilities &amp; training.</p> <p>TMA funds pilot project and funds one nurse consultant to support pilot project such as TeamSteps™ and the Rapid Response at two hospitals: Tripler and Martin. Army portion of budget over \$700,016 K for FY08.</p> <p>Turnover of PSO, military program manager, is a problem. Need to stabilize the position with a GS deputy with the ability to conduct government only functions in the absence of the military PSO. All other positions in the</p>	<p>BUMED Director, Risk Management Office has responsibility for the quality oversight programs including: Infection Control, Quality, Risk Management, Credentialing, PS, and accreditation programs.</p> <p>BUMED has a staff of 10 (Includes the Department Head). BUMED has approved hiring a HQ Infection Control Manager. BUMED budgets for RM department.</p> <p>3.5 FTE are assigned to patient safety:                      0.5 RN Analyst Researcher; 1.0, PS Clinical Data Specialist; 0.5 Administrative Support; 0.5 Program analyst; 0.5 TJC trained fellow/quality specialist; 0.5 Department Head. Staffs are cross-trained to assist with multiple program support.</p> <p><b>Budget:</b> TMA provides (@ 2.9 million) support for 22 contracted PS at 21 MTFs. Turnover of contract and AD staff in MTFs PS/RM positions is a challenge. TMA provided additional funds to support team training simulation study @</p>	<p>AF Healthcare Operations is undergoing reorganization. Starting June 2008 the clinical quality management division will not be split between 2 offices: AFMSA/SG30Q at Bolling AFB DC and AFMOA/SGHQ located at Kelly USA San Antonio, TX. Together they are responsible for the oversight of the clinical quality management programs: risk management, medical staff management, performance improvement and patient safety.</p> <p>The chief of Pt Safety (PS) is an AD officer. The PS staff includes one contract manager who monitors all MTF/AFMOA contract PS Managers positions.</p> <p>Currently, there are 45 quality managers who do patient safety as an additional duty. As of June 2008 4 MAJCOM contract PSMs, one data analyst position, &amp; one GS deputy chief PS position transferred to the new AFMOA. Currently hiring three contract PSM positions two for AES and one for EMEDS.</p>

<sup>1</sup> Interview with Army Patient Safety Representative, 6 December 2007

<sup>2</sup> Interview with Navy Patient Safety Representative, 12 December 2007

<sup>3</sup> Interview with Air Force Patient Safety Representative, 7 December 2007

		MEDCOM PS Office are contract.	MEDCEN.	Air Force <sup>3</sup>
<p><b>Reporting of Event Data</b></p>	<p>Monthly data aggregated and submitted to PSC. Reports from 36 facilities based on parent DMIS structure. They don't edit out any data and submit the exact information as they received it. Number of events reported in a specific category. Have comment section but not the full event report.</p> <p>DoD has an RFP released to purchase a system where the users enter the event data directly into the system. The old software system failed testing. Army converted reporting to a secure web based data entry at MEDCOM. VTC, November 2007, to reflect trends back to MTFs. PS Managers liked the meaningful feedback.</p> <p>Have some MTFs who report less than others and then becomes a focus. Display the level of reporting by facility on a slide. Simple profiling. Feedback at monthly meeting. Dental is listed as well. Other Services don't know the level of reporting for dental since it is</p>	<p>Monthly Summary Reports (MSR) - data aggregated and submitted to PSC by BUMED on monthly basis. BUMED analyzes trends and tracks reports (2003- present). Feedback reports provided to commands by group size to permit tracking and trending at regular intervals.</p> <p>At the MTF level, the incident or event report goes directly to MTF PS/ and/or Risk Manager. MTF PS/RM does SAC scoring to determine level of harm and prioritization. SAC score will trigger an RCA and/or other type of review. Most commands' event data capture/collection/routing systems are paper based. A few commands have local internal reporting and have larger number of reports so the type of capture tool does make a difference. Tri-Service effort to purchase off-the-shelf product for capturing event data stalled due to pilot software system testing failure.</p> <p>Reengaged in May 07.</p> <p>BUMED sends all SE RCAs to PSC, plus</p>	<p><b>Budget:</b> TMA provides \$3.5M per year which covers 35 contract PSM positions. By FY10 AF will fund \$7.9M for the additional PSM positions. Beginning in FY10 each MTF will have a dedicated contractor PSM. The chief of Patient Safety position will remain in the NCR and but the other positions will be at AFMOA in San Antonio, Texas.</p> <p>Monthly Summary Reports (MSR) are forwarded from MTF to AFMOA to the DoD PS Center.</p> <p>Near Miss Reports are reported real time. Our goal is to promote transparency without retribution to increase reporting. Currently, we do SAC scoring but are moving with DoD to use the NCC MERP <sup>4</sup>scale for accuracy.</p> <p><b>Sentinel Events</b></p> <p>AFMSA is responsible for notifying SG and HA. AFMSA/AFMOA performs RCA cell reviews coordinating with clinical consultants on all MTF RCAs. Inpatient MTFs send their RCAs to JC. Outpatient facilities send their reports to AFMSA and to the DoD PSC.</p>	

<sup>4</sup> Note: NCC MERP is the National Coordinating Council for Medication Error Reporting and Prevention

Air Force <sup>3</sup>	
	<p>others that are received.</p> <p><b>Do you have some facilities that report more than others?</b> Reporting depends on scope of services and risk associated with procedures. We have a mix of ambulatory and bedded facilities with different scope of services and levels of risk. Ambulatory reports often focus on pharmacy reports via MEDMARX, as well as falls, documentation, laboratory radiology and consult issues.</p> <p><b>Navy captures chair-side dental data in a separate report developed by BUMED Dental. This is not included in the MSR.</b> BUMED reviews patterns and contacts commands with large variations in reporting numbers. BUMED provides feedback at various intervals; an annual report is also provided. MTF reports are identified by using a random number so they can compare themselves to their like peer group.</p>
	<p>mixed in with other reporting</p> <p>Sentinel Events are conducted for all SAC 3 events, reported by MTFs to MEDCOM and forwarded to DoD Patient Safety Center.</p>
	<p>VTC's monthly for all of the Army quality staff conducted by MEDCOM Quality Management and then a monthly VTC for only PS Managers. Not required to attend.</p>
	<p><b>Program Communications</b></p> <p>VTCs quarterly in past but have 6 scheduled for 08 to share program initiatives, advise on alerts, new projects and requirements. Sessions are 2 hrs and provided twice on the same day to accommodate time zones. Time for sharing by individual commands is included.</p>
	<p>VTCs between AFMOA/PSMs/Quality Managers monthly on all quality/patient safety concerns.</p> <p>AFMOA hosts a monthly PS forum with all MTF PSMs.</p> <p>Collaborates on a daily basis with the DoD PS Program Office.</p>

			Air Force <sup>3</sup>
<p><b>Initiatives</b></p>	<p>1. Program just starting funding (\$310,000) to support the Army Clinical Outcomes Database (Army funded).</p> <p>2. Military Nursing Database (MIND) now converting to a practical application that will be Web based. Tracks nurse sensitive and other areas like IHI 5 M lives campaign.</p> <p>3. IHI - bundle now being collected and reported. Reported to MEDCOM via secure website.</p> <p>Analysis done at HQ and reports sent back out. Report is sent back via encrypted email.</p> <p>4. CDC NHSN- one site actively submitting data to CDC related to infections; at least 2 additional by SEP 08, with full deployment to all Army sites likely shortly thereafter.</p>	<p>1. DoD requires services to implement the Central Line and VAP IHI Bundles at those MTFs with that scope of service. BUMED policy indicated which commands must implement which bundles and must report information on specific monitor back to BUMED monthly. BUMED also identified two other bundles for non ICU commands. Data sent to BUMED for monitoring and evaluation.</p> <p>2. Navy is data sharing member in 5M lives campaign. IHI will send participation reports to DoD.</p> <p>3. CDC Hospital Acquired Infections data base. At the Oct 07, meeting with the DSGs/ TMA, they agreed to add CDC as a member of the DoD quality program and pursue a DUA with CDC. This allows us to input MTF information into the CDC database. At the TMA and services level Infection Control is not a part of the PSP but will be monitored through the DoD Clinical Quality Forum.</p> <p>All Navy MTFs have Infection Control programs and follow CDC guidelines. CDC database has modules some only apply to the large facilities with ICUs. Services may also include other modules if appropriate to size and scope of program. Web based data base. 13-15 hrs of web based training required.</p> <p>4. In 2000, TMA/ HA worked with IHI and VA on a break through series.</p>	<p>Annual quality conference (QSPAR) where patient safety topics are presented; attendees receive CE credit.</p> <p>1 IHI's 100 K lives campaign. Inpatient MTFs program. monitoring infection rates using the central line bundles.</p> <p>2. CDC's NHSN program for reporting inpatient infection rates.</p> <p>3. Tracking and trending compliance with the JC's NPSG.</p> <p>4. Starting up patient safety programs into the AES (aerovac system) and into EMEDS platform with clinical staff that deploy to Iraq, Afghanistan and beyond.</p> <p>5. Expanding and teaching TeamSTEPPS to AF inpatient and outpatient MTFs</p> <p>6. Promoting Microsystems concept as a clinical area performance improvement to promote efficiency.</p> <p>7. Publish lessons learned from RCAs on AF knowledge exchange website</p> <p>8. Review and post best practices from FMEAs and Annual summaries</p> <p>9. Summarize DoD patient safety culture results and incorporate into TeamSTEPPS training</p> <p>10 Capitalize from MTF patient safety leaders as subject matter experts on their benchmark programs</p>

			Air Force <sup>3</sup>
		<p>BUMED had 10 teams participating. The BUMED Administration team worked on implementing a system change with our perinatal advisory board to implement the use of a pediatric CO2 indicator for infant resuscitation cases so they can quickly determine if tube placement is correct.</p> <p>6. In 2002, TMA reorganized and started the PSC. Data referral did not begin until end of 2002 or early 2003. - After all DoD PSP training was completed (began in July/August 2001, suspended until Jan 2002). DoD obtained Licenses for MEDMARX and TapRoot® which became standard tools for DoD reporting of medication errors and RCAs.</p>	
<p><b>Facility Numbers and contract PS Manager Positions</b></p>	<p>26 Hospitals and 11 large clinics / ambulatory surgery centers</p> <p>Army PS Managers are GS or military. Emerging trend is that PS GS are being promoted to other Quality Positions. Each Service decided how they were going to staff but Army chose to use GS.</p> <p>37 funded positions. Every facility has to have PS. Some funded MTF are “dual hated”, typical risk management and infection control. If the PM was “King for a day” he would not have them dual positions. PS is a large job and could keep someone fully employed even at a small site and would also do away with conflict of interest.</p> <p>Turnover of staff is critical issue.</p>	<p>Navy has 28 MTFs and 3 Dental Commands= 31 facilities.</p> <p>Contract staff at 20 facilities; 11 MTFs PS/RM positions are Active Duty or GS.</p> <p>Downside: Contractor can't make decisions for Navy so can be an issue. During a major contract change lost 1/3 of the staff. The PS Managers have various educational backgrounds but must have at least two years experience in a clinical setting. Statement of Work written such that commands have flexibility in tasks assigned to support their resources and needs of the program. Turnover in PS Managers is/can be critical issue. Contracts are for 4-5 yr time frame - renewable annually.</p>	<p>There are 76 MTFs 15 Hospitals; 51 ambulatory clinics</p> <p>35 Contract PSM positions at the MTFs. They report to AFMOA.</p> <p>By FY10 the plan is to have a dedicated PSM in every MTF.</p> <p>PSMs have various educational backgrounds but must have a bachelor's degree in health care.</p>
<p><b>Dental</b></p>	<p>Dental started early 2005. PS</p>	<p>Prior to October 2004 Navy had 15</p>	<p>Dental clinics are part of each medical</p>

			Air Force <sup>3</sup>
<p><b>Collaboration with outside agencies</b></p>	<p>coordinator at each dental facility but is a collateral duty. Not going to monthly VTCs.</p> <p>MEDCOM PS Program has one staff to support Dental Program.</p> <p>Dental reports the same as clinical side. They have made reporting process for dental more for them such as soft pallet injuries.</p> <p>ADA featured the program in an article on their website. ADA may want to push quality and infection control as well as PS measures. Dental access the same web page for reporting but then they access only dental reports. Managed by permission. Service uses Crystal Reports to generate reports for facilities. Reports to DENCOCM and they send to Dental facility.</p> <p>Dental Taxonomy developed by Army for use and hopes to adapt to other Services. Started with current taxonomy and SMEs to tailor it to dental. There is no civilian taxonomy to compare to.</p>	<p>standalone Dental commands. By March 2005 all but 3 Dental commands were integrated into medical commands. The three standalone commands are connected to the Marines and are considered operational.</p> <p>Each dental clinic plus the 3 standalone clinics submit quarterly dental PS reports to BUMED for analysis - this represents data on chair side dental. Prior to the integration, Dental Corps developed a Dental PS SAC scoring model and identified types of events to track and trend. Dental sent their PS/RM to the DoD PSP training.</p>	<p>group and are not separate like the Army. They undergo JC accreditation and AF IG inspection, and have been part of PS since inception. We partner with the dental consultants for PS topics.</p>
	<p>List of other groups that PSO is working with currently are IHI, AHRQ, CDC for electronic data collection of HAI, NSQIP.</p> <p>Benchmarking with outside agencies difficult to do since DoD doesn't publish data.</p>	<p>Sharing of QA data outside of DoD is limited to those agencies / organizations with whom DoD has a formal Data Use Agreement. Currently the list includes: IHI, CDC and The Joint Commission.</p> <p>Other proposed groups include the American College of Surgeons (NSQIP</p>	<p>Work with IHI, CDC, VA, Harvard, DoD hospitals. Also collaborate with individual civilian hospitals that are similar size and patient flow for benchmarking and best practices.</p> <p>Working with Kaiser Permanente on Perinatal risk reduction.</p>

			Air Force <sup>3</sup>
	<p>Looked at IHI for improvement initiatives.</p>	<p>program).            AHRQ participation is by interagency agreement in common formats testing, and grants for beta testing of tools developed by AHRQ grantees.            Three Navy sites participated in common formats testing, one in grants for tool testing.</p>	
<p><b>Education and Training</b></p>	<p>Regions have PS Mgr or Quality Management Consultant with PS being part of it. They handle site visits to support the MTFs. The MEDCOM PS Program office may conduct site visit as well and support the HCTCP training.            All PSMs attend PS Basic; many attend the enhanced course. Annually, about 1/3 of patient safety managers are sent to one of the major national conferences conducted with a focus on patient safety (NPSF, IHI, Joint Commission conference, etc.)</p>	<p>Annual JC Training Conference is a 4.5 day program: 2.5 days devoted to JC and 2 days to PS/PI and RM. Provide various resource materials to commands including CD ROMs. Navy purchases subscriptions for each MTF to ASHRM, ECRI and RMF Interactive for their RM/PS staff to utilize these professional external resources. TMA provides 3 ISMP            Newsletters for sharing.            All PSMs - contract, AD and GS - attend PS Basic training; many selected PS/RMs attend the enhanced course.            Annually, about 5-8 PS/RMs attend national conferences that focus on patient safety (NPSF, TapRoot® conference, etc.)            Tri-service contract awarded to provide web-based perinatal, neonatal nursing and fetal heart monitor training to designated peri- and neonatal staff.</p>	<p>PSM attend Basic PS Training conducted by CERPS.            Currently encouraging MTF leadership to attend basic PSM course. Pt Safety training is conducted at commanders and SGH training programs.            Dedicated AF TeamSTEPS instructor and marketing DoD Microsystems Training. Many MTFs are receiving AFSO 21 Lean training. Also training on tools like FOCUS-PDCA, and attendance at the annual quality symposium. From which CEs are earned and CDs are distributed.</p>
<p><b>PS Corporate Performance Measures (BSC)</b></p>	<p>Medication Reconciliation compliance and compliance with the “final time out” to prevent wrong site, wrong procedure, wrong patient surgery has been on the AMEDD BSC for the past 2 years.</p>	<p>BUMED defined four IHI bundle monitors to measure; MEDMARX data is also analyzed and Six Sigma tools are applied for analysis; Perinatal/OB measures are addressed through the Advisory Board and the NPIC measures.</p>	<p>AF/ SG uses “Eagle Look”. For decision making. Currently reviewing clinical quality and PSI measures.            Incorporating PS measures into MHS Portal</p>

			Air Force <sup>3</sup>
		<p>BUMED whole goals under development - focus on patient safety monitors.</p> <p>Have addressed hand hygiene in all settings, MRSA and resistant organisms in high risk settings targeting recruit stations, ICU settings and wounded warrior program</p>	
<p><b>Recall Program</b></p>	<p>Several systems to track this type of information such as RASMAS (check with AF). Army uses MMQC messages sent out from USAMMA.</p>	<p>Command notifications occur through receipt of Alerts and Advisories for multiple sources including FDA (website had free email notification of alerts/advisories; BUMED, NAVLOGCOM (MMQC); ECRI membership provides weekly updates on RM/PS topics including recalls. DoD PSC also provides alerts and advisories.</p> <p>Distribution of Advisory, Alerts, and Focused Reviews go to all the PS/RM communities. Depending upon the topic, may also go to the various BUMED Corps Chiefs or Specialty Leaders. If needed BUMED will request feedback of notification.</p> <p>Commands have advised us that they receive multiple emails on the same subject. All commands have a recall policy in effect.</p>	<p>Using ECRI subscription for Alerts Tracking for all AF for medical equipment and now purchasing other modules. ECRI has blood, material, and medical equipment.</p>
<p><b>AHRQ PS Indicators</b></p>	<p>PS performance measures reviewed and PSC provides a service look. Information sent to commanders via policy memo that indicated they need to look at their MTF data. Determine if it is a data quality issue, or quality of care issue or a combination. Don't display data at this point due to data coding issues. Scientific Advisory</p>	<p>PS performance measures reviewed and PSC provides a service look.</p> <p>Commands are reminded monthly in a checklist to review designated PSI data quarterly to determine if information is accurate and advise internally if issues are detected. Determine if it is a data quality issue, quality of care issue, or a combination.</p>	<p>Have reviewed coding issues and PSI on the MHS portal.</p> <p>PSI information sent to commanders via policy memo that indicated they need to look at their MTF data. We are determining if it is a data quality issue, or quality of care issue or a combination.</p>

			Air Force <sup>3</sup>
	<p>Panel and the NQMP contractor conducted focused study for Birth Trauma and found coding problem.</p>	<p>Data source is the M2 coding database - the Scientific Advisory Panel and the NQMP contractor conducted focused study for birth trauma, medical and surgical infections and found significant coding problems existed and recommended caution in interpretation without data validation.</p> <p>The PSI under review include: birth trauma (also measured by NPIC) and medical and surgical infections.</p>	
<p><b>Education and Training</b></p>	<p>Basic course meets needs of PS Mgr. Army uses PI framework of Rapid – PCDA and Lean Six Sigma. LSS hasn't been integrated into PS and is being worked independently. Advanced course is needed for PS Managers.</p>	<p>Clear description of how LSS fits into the quality/PS equation as a useful tool for data use and evaluation.</p> <p>Mid-level staff needs as included in the enhance course for the 1-4yr experience level should include: advanced TapRoot®/FMEA training; help with prioritization of tasks and dealing with resistance; and facilitation skills for group efforts like RCAs, FMEAs.</p> <p>Advanced practitioners need guidance on executive summaries; how to analyze data and know what it means; and how to present information in executive sessions.</p>	<p>See above</p>

## **Appendix F: Center for Education and Research in Patient Safety (CERPS) Educational Offerings**

	Audience
"A Primer for Patient Safety" - document	DoD personnel fulfilling a Patient Safety Management role
"An intro to Patient Safety" – online course	DoD personnel fulfilling a Patient Safety Management role
Patient Safety Overview - training program	Patient Safety Managers, Nurses, Physicians, Pharmacists, Risk Managers, Joint Commission Coordinators
Basic Patient Safety Manager - training program	DoD personnel fulfilling a Patient Safety Management role
Advanced Patient Safety Manager - training program	DoD personnel fulfilling a Patient Safety Management role with 1-3 years of experience
Basic TapRoot / FMEA - training program	Patient Safety Managers
Advanced TapRoot - training program	Patient Safety Managers who have completed Basic TapRoot
Basic MEDMARX - training program	Patient Safety Managers, Nurses, Physicians, Pharmacists
MEDMARX – Analysis and Reporting - training program	Patient Safety Managers, Nurses, Physicians, Pharmacists who are familiar with MEDMARX
TapRoot Summit - meeting and training	Patient Safety Managers who have completed Basic TapRoot
Patient Safety Regional Conference – meeting and training	Providers, Department Heads, Facility Command Staff, Patient Safety Staff
Micro System Concept – consultative training	Medical teams and Patient Safety Managers addressing specific patient safety issues
Failure Mode and Effect Analysis (FMEA) – training program	Patient Safety Managers, Nurses, Physicians, Pharmacists, Risk Managers, Joint Commission Coordinators

## Appendix G – DoD Patient Safety Program & Best Practice Organizations or Comparison Chart for DoD and Integrated Organizations

In that comparison table, organizations found to meet a criterion are identified with green bullets (●). If an organization does not yet fully meet a criterion, but is actively working towards it, bullets for text are yellow (●). If an organization does not meet some facet of a criterion, its bullets for text are red (●).

<p><b>DoD Military Health System (MHS)</b> is a partnership of medical educators, medical researchers, and healthcare providers and their support personnel worldwide. MHS consists of the OASD for Health Affairs; the medical departments of the Army, Navy, Marine Corps, Air Force, Coast Guard, and Joint Chiefs of Staff; the Combatant Command surgeons; and TRICARE providers (including private sector healthcare providers, hospitals, and pharmacies).</p>	<p><b>The Veterans Health Administration</b> has 157 hospitals nationwide and manages one of the largest health care systems in the United States. VA Medical Centers (VAMC) within a Veterans Integrated Service Network (VISN) work together to provide efficient, accessible healthcare to veterans in their areas. The VHA also conducts research and education, and provides emergency medical preparedness.</p>	<p><b>Sentara</b> operates more than 100 care giving sites, including seven acute care hospitals with a total of 1,728 beds, nine outpatient care facilities, seven nursing centers, three assisted living centers, and about 360 primary care and multi-specialty physicians. Sentara also offers a full range of award-winning health coverage plans, home health and hospice services, physical therapy and rehabilitation services, including Nightingale - the region's only air ambulance service.</p>	<p><b>Sharp</b> is an integrated delivery system consisting of four acute care hospitals, three specialty hospitals, three affiliated medical groups, a liability insurance company, and two philanthropic foundations. It is licensed to operate 1870 beds, and provides care for approximately 785 thousand individuals annually, including 350,000 HMO enrollees.</p>
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				Sharp
<b>IOM Domain - Patient Safety Culture</b>				
<p><b>1. Shared belief</b></p> <p><i>Top down and bottom up training and awareness in patient safety</i></p>	<ul style="list-style-type: none"> <li>Standardized Patient Safety Manager (PSMs) basic and advanced training courses.</li> <li>CERPS offers regional PS training conferences, and training in MEDMARX® and TapRoot™. This takes the training to the point of need.</li> <li>All facilities have completed a Patient Safety Culture Survey (2005/2006) to establish a baseline, had opportunities to address issues, and are now taking the survey again (2008) to determine if changes have been sustained.</li> <li>MTF level Patient Safety Managers train local staff, as needed based on local issues.</li> <li>High turnover with PSMs</li> </ul>	<ul style="list-style-type: none"> <li>Training is full day. Standardized Patient Safety Manager training and others allowed to attend as space is available (this training is three days).</li> <li>Goal is to train all staff leaders at all facilities by 2008.</li> <li>Training is full day for leaders, such as Directors, Associate Directors, Chiefs of Medicine, and Nurse Executives.</li> </ul>	<ul style="list-style-type: none"> <li>All staff get standardized four hours Patient Safety training.</li> <li>All employees eligible for a bonus that is tied to Patient Safety execution.</li> <li>Every level in the organization must be involved in patient safety - From Board to the lowest level. Based in "behavior accountability". Set the expectation, knowledge, and skills.</li> <li>All new employees participate in a mandatory standardized training during orientation.</li> <li>Shared belief is Patient Safety must be accepted by all staff (not just caregivers) to create a safe environment.</li> </ul>	<ul style="list-style-type: none"> <li>Developed "The Sharp Experience" which includes vision, mission and four core values (Integrity, Caring, Innovation, Excellence) / Six pillars of excellence - Quality, Service, People, Finance, Growth, and Community. Imbedded within these pillars is Patient Safety</li> <li>The Sharp Experience is, a performance-improvement initiative designed to transform the healthcare experience and make Sharp the best place to work, the best place to practice medicine, and the best place to receive care. This is shared with all new hires. Everything at Sharp HealthCare (SHC) is aligned under the six pillars of excellence. These concepts are shared with every employee at orientation when they come on board. Part of every new hire's orientation (clinical and non-clinical staff alike) includes a 30-minute session on patient safety that includes SHC's values and beliefs around patient safety and an overview of the strategic plan for patient safety.</li> <li>Existing employees received training in the Sharp Experience as well through staff awareness, tools training, etc.</li> <li>Every year there is an all employee</li> </ul>

				<p align="center"><b>Sharp</b></p>
<p><b>2. Organizational commitment</b></p> <p><i>Investment in the structures, policies, and resources that foster PS</i></p>	<ul style="list-style-type: none"> <li>● Funded, created and implemented the DoD Patient Safety Program</li> <li>2. Patient Safety Center</li> <li>3. Healthcare Team Coordination</li> <li>4. Center for Education and Research in Patient Safety</li> <li>5. Service Patient Safety Programs</li> <li>● Patient Safety is clearly a core value for the MHS</li> <li>● Patient Safety Managers at most</li> </ul>	<ul style="list-style-type: none"> <li>● National Center for Patient Safety staffed with ~50 professionals</li> <li>● Local Patient Safety Managers at most every facility (some facilities have more than one) and Patient Safety Officer at Every Network Office (21 networks for ~150 hospitals)</li> </ul>	<ul style="list-style-type: none"> <li>● Patient Safety is seen as a Core Value vs. a priority that can be demoted</li> <li>● The Core Value is zero percent harm to patients</li> <li>● Training in error reduction for back office functions, medical group training, nursing homes trained - all functional elements</li> <li>● Each facility has a Patient</li> </ul>	<p>update on progress against vision/mission and what Sharp stands for and what they are all about – includes vignettes from across the system that cover patient stories and safety stories.</p> <ul style="list-style-type: none"> <li>● System report card is updated on intranet and at annual assembly and reviewed will all employees. Staff know what they are working towards, what they have or have not achieved, and what they will be working towards next year. There is always a safety goal.</li> <li>● Quality and safety goals span all hospitals - Each will have slightly different goals and are included vertically in every staff person's performance appraisal, from CEO to lowest level staff.</li> </ul>
	<ul style="list-style-type: none"> <li>● Patient Safety Managers and Medication Safety Officers at all hospitals.</li> <li>● Based on goals, resources are allocated appropriately to drive progress towards goals (Black Belt Six Sigma staff, etc.)</li> <li>● Organization won Malcolm Baldrige award for 2007.</li> <li>● Six Sigma department with four Black Belts who can be allocated to</li> </ul>			

<p><b>3. Balance the need for reporting versus discipline</b></p> <p><i>Seeking the correct balance between patient safety-related event or near miss reporting, and the discipline necessary for effective risk management</i></p>	<p>every facility, either full time of dual-hatted at smaller facilities.</p> <ul style="list-style-type: none"> <li>● Service-level monthly VTCs with the facility PS Managers.</li> <li>● Monthly Total Clinical Quality Forum Meetings with all key quality leaders in the MHS.</li> <li>● Every six to eight weeks the Patient Safety Planning and Coordination Committee meets with the key PS leaders.</li> <li>● Dental is included in the PS program.</li> </ul>		<p>Safety specialist.</p> <ul style="list-style-type: none"> <li>● 60 Patient Safety Coaches identified at the largest tertiary facility, however each facility has a Safety Coach identified and trained for every department and additional training conducted</li> </ul>	<p><b>Sharp</b></p> <p>projects from executive levels to throughout the organization, also do change acceleration and performance improvement education – trying to get all managers trained.</p> <ul style="list-style-type: none"> <li>● Other Green Belts propagate learning throughout the organization as well.</li> <li>● Multidisciplinary system safety steering committee led by SVP of Clinical Effectiveness and including cross section of representatives from throughout the system</li> </ul>
	<ul style="list-style-type: none"> <li>● DoD has a mixed model where in some cases single individuals fulfill both a Risk Management and Patient Safety role.</li> <li>● Model may also include other roles such as Infection Control, Joint Commission Coordinator, or Quality Manager.</li> </ul>	<ul style="list-style-type: none"> <li>● Risk Management and Patient Safety are seen as two separate disciplines and treated as such (Patient safety manager is also separate from quality manager – two different jobs and two different people. Patient Safety Manager is not subordinate to Quality Manager, both report independently to Director or other senior official.)</li> </ul>	<ul style="list-style-type: none"> <li>● Use Risk Master software</li> <li>● Risk Management function is kept separate and reports to Corporate</li> <li>● Near misses are reported and reviewed by the Quality Management department to determine lessons learned.</li> </ul>	<ul style="list-style-type: none"> <li>● Have imbedded in error reporting policy a “fair and just” culture principal.</li> <li>● By combining David Marks Just Culture principals and tools with an expectation of personal accountability a fair balance is created between fair and just and accountability.</li> <li>● A systems approach is balancing appropriate individual and organizational accountability with a complete blameless culture. Staff or organizational behaviors that need changed are being addressed at every level in the organization – including</li> </ul>

				<p style="text-align: center;"><b>Sharp</b></p> <p>physicians.</p> <ul style="list-style-type: none"> <li>● After Event RCAs manage all stakeholders involved (patients not included in our RCAs yet. This is a goal we are working toward and staff who are harmed) all get followed up on afterwards to ensure that they are OK and recognizing that patient safety extends beyond patient safety into every area of the org. – everyone needs to make better decisions – a journey that is long and they are equipped with tools necessary to make change.</li> <li>● Two and a half years ago purchased an error reporting system that is deployed across the organization. Risk Management department is involved with the system. Interaction between PS and RM. Alert system set up is based on nature and severity of events as determined by staff person. Pemenic is the system</li> <li>● Risk Managers involved in dialogue as events are reported – actions and recommendations are discussed as may be appropriate</li> <li>● Have Patient Safety Officers, Safe Medication Pharmacists located throughout, and now expanding out to operational staff as well through the PS Committee, because PS is imbedded in plan that all need to try</li> </ul>
<p><b>4. Recruitment and training of staff</b></p> <p><i>Widely distributed awareness and methods</i></p>	<ul style="list-style-type: none"> <li>● Patient Safety Managers in the DoD are all trained with standardized training through the Center for Education and Research in Patient Safety (CERPS).</li> </ul>	<ul style="list-style-type: none"> <li>● Patient Safety Managers in the VHA are all trained with standardized training provided by NCPS.</li> </ul>	<ul style="list-style-type: none"> <li>● Two-day Causal Event training that anyone can attend; Analysis teams have been established at each facility.</li> </ul>	

used to sustain the culture of patient safety	<ul style="list-style-type: none"> <li>● Culture survey being repeated this year, 2008, to assess the change from the first survey.</li> <li>● Site visits revealed a very high level on awareness and commitment to patient safety among MTF staff.</li> <li>● Not all targeted clinical staff have received CERPS patient safety training</li> <li>● Plan in place to train all clinical and non clinical , but not support, staff on patient safety</li> </ul>	<ul style="list-style-type: none"> <li>● Not all clinical staff are trained on patient safety (All VA staff receive as part of their new employee orientation an explanation of the patient safety program by the patient safety manager. There have been approx. 6,000 RCA team members that are physicians (some will have been on more than one RCA) with membership on approx. 45% of all RCAs. There have been over 10,000 nurse team members (some will have been on more than one RCA) on approx. 80% of all RCAs )</li> <li>● Plan in place to train all staff on patient safety.</li> <li>● 50% of interns and residents in the US train in a VA facility and all are trained on Patient Safety – this significantly spreads the importance of patient safety</li> <li>● VA has a Patient Safety Fellowship Program to train fellows in patient safety (1 year program). VA Quality Scholars program has also provided opportunities for patient safety training and projects to implement patient safety improvements – a recent major project in medication reconciliation has been led by a</li> </ul>	<ul style="list-style-type: none"> <li>● Every employee learns the 5 behavioral based expectations (BBE) - creates common language and interaction culture. BBE tied to employee evaluation.</li> <li>● STAR training- Stop, Think, Act, Review is a self checking tool for better critical thinking decisions</li> <li>● Red Rules- are rules that are to NEVER be broken because they could harm a patient; and can lead to disciplinary action if needed.</li> <li>● Developing BBEs specific for leadership staff</li> <li>● Not all clinical staff are trained on patient safety</li> <li>● Sentara recognizes that they are further behind in training of providers and leadership and are taking steps to close the gap</li> </ul>	<p><b>Sharp</b></p> <p>to achieve.</p> <ul style="list-style-type: none"> <li>● Pharmacist, clinical nutritionist, device design / purchasing, Human Factors, all incorporated into committee to ensure that safety criteria and usability criteria are aligned.</li> <li>● Shared Vision across the organization helps ensure that PS is integrated into existing systems / structures so it becomes a part of what we do everyday.</li> <li>● National PS Foundation conferences, IHI, Human Factors - Systems Engineering Initiative for PS (SEIPS) course out of University of Wisconsin, Madison). Plus internal training.</li> <li>● After an event or near miss that results in a RCA massive amounts of training is delivered to all involved to fix systemic issues and prevent issues in the future – these people become big safety champions in their areas.</li> <li>● Team Training Program – 2004 core group went through Med Teams training, then TeamSTEPS training was taken, recently sent some master trainers back for update training to get more assessment tools to use in the organization</li> <li>● Team Resource Management is a</li> </ul>
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		"Quality Scholar."		<p><b>Sharp</b></p> <p>customized version of TS, which focuses on risk, the prevalence of issues, human factors, etc., now deployed to every single employee – even contractors- at Sharp Chula Vista Hospital. Have a good sustainability program as well. PSM holds monthly lunch and learns where topics of team training are discussed – use Brian Sextons PS team Culture and saw some statistically significant changes they were after.</p> <ul style="list-style-type: none"> <li>● More strategically deployed or on a voluntary basis in other areas at managers request.</li> <li>● Annual PS Conferences – sixth annual – 150 – 200 staff and physicians come and offer speakers and topics based on needs identified in surveys and safety steering group.</li> <li>● Systems and Structures in place for Patient Safety specifically – there are site PSOs at each hospital, PS Pharmacist at each hospital, a PS Committee that is multidisciplinary that discusses operational PS issues. This group brings forward events that have occurred that Sharp can learn from, or proactively seeks out risk areas that need addressed.</li> <li>● Near Miss reporting helps drive out risk issues across the organization</li> <li>● PS Analyst sets up the alerts that go out to the various department</li> </ul>
<p><b>5. Organizational commitment to detecting injuries and near misses</b></p> <p><i>Methods and processes that promote transparency</i></p>	<ul style="list-style-type: none"> <li>● DoD require reporting of near misses and events at a higher level than the Joint Commission requires</li> <li>● DoD utilizes MEDMARX® for medication event reporting</li> <li>● DoD requires reporting of near misses and events related to dental care</li> <li>● Services de-identify some reporting data that is forwarded to the DoD Patient Safety Center, limiting transparency and this limits the ability</li> </ul>	<ul style="list-style-type: none"> <li>● Facilities must report near misses and events to the NCPS</li> <li>● At the Network level the Network Patient Safety Officer is able to see all of the events and RCAs for the Network. At the facility-level, they can see their own work. When there is an interest in a particular topic, patient safety managers request from NCPS a data analysis and receive information back that encompasses the entire nation's data.</li> </ul>	<ul style="list-style-type: none"> <li>● RCA facilitated by Quality Management to identify opportunities for improvement; results go to leadership and all staff so everyone learns from the experiences of others</li> <li>● Closed loop process</li> </ul>	

<p><b>6. Analysis of injuries and near misses</b></p> <p><i>Patient Safety analysis methods and processes at facility and program levels</i></p>	<p>to do comparative analysis (by size).</p> <p>NOTE: New language in the updated 6025.13 regulation will require Service PS Programs to report events by facility name.</p> <ul style="list-style-type: none"> <li>● Event level reporting is not transparent and shared across the organization so that all can learn from the experiences of others – Sentinel events are shared by focused review by event types category.</li> <li>● PSP shares event level sentinel events within functional areas of MTFs and based on need to disseminate materials widely – e.g. a Never Event.</li> </ul>	<ul style="list-style-type: none"> <li>● NCPS conducts analysis of event reports to identify issues that need resolved, or that cross the enterprise.</li> </ul>	<ul style="list-style-type: none"> <li>● All events are analyzed and recorded in a central database.</li> <li>● Use of Individual Human and System Failure Charts borrowed from the Nuclear Power Industry.</li> <li>● Events and Causal Factors charts used in analysis to identify inappropriate acts that lead to root causes.</li> </ul>	<p><b>Sharp</b></p> <p>managers and other interested parties, such as RM, CNO, CEO, infection control, etc., depending on event type and severity of event.</p> <ul style="list-style-type: none"> <li>● Near misses can be made very transparent to the entire organization for awareness Trying to get same level of transparency for events – within an organization it is fine for internal sharing – outside of individual organizations is a bit harder.</li> <li>● Professional Practice Councils share event information and high-level views to drive out issues and define solutions.</li> </ul>
	<ul style="list-style-type: none"> <li>● DoD Patient Safety Center conducts analysis of event reports to identify issues that need to be resolved, or that cross the enterprise.</li> <li>● Service Patient Safety Program Officers conduct analysis across the sites within their Service to identify and address Service-specific risks.</li> <li>● MTF Patient Safety Managers and staff constantly work to identify risks, and/or respond to near misses and events in such a way as to drive the risks out of the methods and processes of the organization and increase overall patient safety.</li> </ul>			<ul style="list-style-type: none"> <li>● Reporting all events - Encourage near miss reporting to be more proactive.</li> <li>● Real Time deployment of reporting system allows the organization to be much more agile and responsive to potential issues.</li> <li>● Every Quarter each unit / department gets a report card about top events, by type, severity, basis, etc. – third quarterly report card has been sent. Great benefit in getting this type of information out to the staff (this goes to the department manager who can then share with the staff).</li> <li>● Sharing of information outside the</li> </ul>

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<p><b>7. Open communication</b></p> <p><i>Clear expectations set through the establishment of organizational goals and the sharing of injury results inside and outside of the organization</i></p>	<ul style="list-style-type: none"> <li>● At the executive level information is shared at the MHS Clinical Quality Forum, and if indicated, the Clinical Proponency Steering Committee at the Deputy Surgeon General level.</li> <li>● At the program level, information is shared at the Patient Safety Planning and Coordinating Committee.</li> <li>● At the Service level, each Service has a Patient Safety Representative that holds monthly conference calls with facility level Patient Safety Managers.</li> <li>● Policies and information flow from the executive level down to the facilities, and back up again through these channels.</li> <li>● Aggregate patient safety data can</li> </ul>	<ul style="list-style-type: none"> <li>● Monthly Patient Safety Officer calls across the program.</li> <li>● Monthly National Patient Safety Manager call managed by the NCPS.</li> <li>● Advisory Creation Tool – closed loop tool for disseminating advisories and alerts.</li> <li>● The VA's NCPS has shared extensively its results with other organizations engaged in similar work. For instance, NCPS staff were actively involved and speakers at the Joint Commission's conferences on universal surgical protocols, drawing upon the experience and</li> </ul>	<ul style="list-style-type: none"> <li>● The Corporation sets the individual Behavioral Based Expectations (BBEs) for the organization.</li> <li>● During orientation all staff are trained on these BBEs.</li> </ul> <p>NOTE: Virginia does not have an established Patient Safety Organization (PSO) that we would report our events to.</p>	<p>organization – involved in a community wide PS task force – driven by the TF as to which issue it wants to work on – current focus is on PS with PCA – 13 hospitals from community involved, are producing a tool kit that can be taken back to the hospital around making PCA safer, previous focus was on standardizing medication issues. To create the burning platform an open dialogue allows for sharing of event types to generate a “burning platform” across the member organizations.</p> <ul style="list-style-type: none"> <li>● Seek to identify external benchmarks, set standards high - to the highest deciles, or quartiles as targets.</li> <li>● CEO ensures that everyone's performance goals are linked to organizational goals.</li> <li>● Used the Vermont Oxford Network PS Culture Survey in the past, which ended up customized across the organization.</li> <li>● Now have adopted AHRQ Patient Safety Climate Survey – this will be standardized across the org. will be deployed via the Web / intranet – every staff person will have access to it. Then they can organize and analyze data by department. / level of care, unit-based, etc. Seeking to make improvements based on results</li> </ul>

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	be shared outside DoD with organizations that have a Data Use Agreement in place with the DoD.  ● DoD has no way to verify that providers have reviewed reported information – no closed loop system.  NOTE: DoD does not share individual injury results data outside of the organization (protected under Title 10, Section 1102).	results from NCPs. Similarly, NCPs staff have presented information on large-scale projects related to fall injury reduction at the National Falls Conference conducted annually at USF. Information on our results and experience has also been shared with AHRQ, DoD, IHS, WHO, and others interested in similar activities.			of survey will advance their journey.
<b>IOM Domain - Program to Enhance Patient Safety</b>					
<b>1. Injury and near miss detection</b>  <i>Passive Reporting (post event user driven reporting)</i>  <i>Active Reporting (Surveillance and use of triggers)</i>	● Have a passive paper based event reporting process (currently paper based). The MEDCOM has developed a web based system but this is not adopted by the other Services.  ● DoD submitting data on IHI bundles. Ability to track trends against outside agencies. Working with CDC on HAI data submission using National Healthcare Safety Network.  ● No electronic reporting system for non-medication patient safety events at this time.  ● MEDMARX® does allow for active event reporting (surveillance and triggers) for medication errors.  ● Actively evaluating COTS electronic	● Online tool for event reporting.  ● Have an Electronic Medical Record; therefore the VA could do automated surveillance.  ● No automated surveillance has yet to be initiated.  ● Online tool for event reporting.	● Have a passive event reporting process (paper based).  ● Audits are conducted using the IHI Global Trigger Tool by looking for triggers in the Medical Record of things not being reported.  ● No electronic reporting system at this time, Process in place to implement an electronic on-line reporting system in 2008.  ● Actively evaluating COTS electronic reporting tools.  ● No active surveillance with triggers. Active triggers for	● Have a passive event reporting process and system.  ● Sharp is moving to Cerner as the Electronic Health Record – deployed at one hospital so far, and will then move to other hospitals next.  ○ Clinicom is in use in some facilities (includes a trigger tool called “On Watch” – which would combine factors in real time to give unique insights to help care givers care for patients  ○ This is being lost as the org migrates to Cerner, therefore...  ● Working with Cerner to generate similar triggers / flags in the Cerner system.	

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	reporting tools. <ul style="list-style-type: none"> <li>● NSQIP – passive surveillance for triggers.</li> <li>● Pharmacy Data Transactional System – active surveillance for triggers.</li> </ul>	surveillance of potential events occur with Medical Staff triggers for Peer Review, Risk Management referrals to Quality Management, Automatic monthly querying for events which have been coded by HIS (i.e.: Retained Foreign Bodies) for evidence of events that may not have been reported.	
<b>2. Epidemiological analysis, hypothesis for change generation and prioritization</b>  <i>Detailed analyses</i>	<ul style="list-style-type: none"> <li>● Have a database of patient safety data at the DoD Patient Safety Center (PSC).</li> <li>● The PSC is staffed with an epidemiologist and other experienced analyst to conduct detailed analyses.</li> <li>● The National Quality Management Program (NQMP) is staffed with epidemiologists and has conducted two patient safety–related studies.</li> </ul>	<ul style="list-style-type: none"> <li>● Have over 9000 Root Cause Analyses and over 4500 aggregated reviews in their database. In total over 450,000 adverse events and close calls have been reported – this includes reports that were subject to RCA or to Aggregated Reviews as well as those that were not prioritized for in-depth review.</li> <li>● The National Center for Patient Safety is staffed with epidemiologists to conduct detailed analyses.</li> </ul>	<ul style="list-style-type: none"> <li>● Conducts a variety of analysis (both internally and/or externally through the Community Task Force) but does not use epidemiologists.</li> </ul>
<b>3. Rapid-cycle testing</b>  <i>Once a change is selected then a method is used to rapidly determine if that change is effective locally</i>	<ul style="list-style-type: none"> <li>● Rapid Cycle Testing was identified during site visits to MHS MTFs as a method to try out improvement approaches in a small scale, and if appropriate measurements were achieved, then rolled out more broadly in the MTF.</li> </ul>	<ul style="list-style-type: none"> <li>● Do this for small facility based issues and once proven deploy enterprise wide.</li> <li>● Stand-down process adopted from Navy for critical issues evaluation and change.</li> </ul>	<ul style="list-style-type: none"> <li>● Use rapid cycle testing – piloting or “trystorming”</li> <li>● Use standard work to error-proof processes.</li> </ul>

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<p><b>4. Deployment and implementation</b></p> <p><i>Choose an important system wide issues, use rapid-cycle-testing and deploy learned change</i></p>	<ul style="list-style-type: none"> <li>● TeamSTEPSTM is an example of a system wide response to the issue of poor communication, addressed at the local level.</li> <li>● TeamSTEPSTM begins with an evaluation of local issues, then the training is tailored to address local needs, delivered, and follow up evaluations are done to ensure that change is solidified.</li> <li>● Patient Safety Center researches solutions to identified systemic issues and issues focused reviews to alert the MHS community to issues and potential ways to reduce risks at the local level.</li> <li>● Site visits to MHS MTFs identified that rapid cycle testing was used in at least two facilities to determine the effectiveness of a process change before a large-scale roll out of the change occurred.</li> </ul>	<p>correct surgery requirements, hand hygiene requirements, special assessment tools, new software capabilities, etc. This is important because it shows that the policy or tool can be implemented in ‘real world’ settings prior to release. The pilot tests have usually involved from about 6 to 10 VA facilities.</p> <ul style="list-style-type: none"> <li>● Within the VA, national policy is driven by the development of directives and information letters. The process involves the development of proposed guidance using field representatives and subject matter experts. Proposed national guidance (i.e., changes) are then reviewed and vetted through numerous programmatic and operational offices. Suggestions and queries are addressed prior to finalization and signature by the Under Secretary for Health. Deployment from our office involves the dissemination of information through various means (emails, teleconferences, national video conferences, national meetings) and the development of support materials. An example is the development of the ensuring correct surgery directive. This was initially based upon research and findings from the patient safety database, and</li> </ul>	<ul style="list-style-type: none"> <li>● Human factors engineering used to create quiet zones for medication dispensing.</li> <li>● When best practices are identified they are spread via the Patient Safety Coaches meetings, Quality Improvement Coordinators in each facility, and system Nursing Practice Forums: i.e.: Critical Care Nursing Practice Forum.</li> </ul>	<ul style="list-style-type: none"> <li>● Hypothesis – what problem to fix and expected outcome, then deploy change on a small-scale basis – did it get results expected? If yes then role out bigger.</li> </ul>

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		<p>the involvement of beta sites to test the proposed new requirements. Modifications were made based upon feedback, and extensive materials for support materials were created, disseminated, and discussed. These included: videos, posters, FAQs, expert as resources, software modification to capture this information, and toolkit development. This national policy and the support materials have been liberally used by other nations and other healthcare providers.</p> <ul style="list-style-type: none"> <li>● In some cases, our VHA Patient Safety Alerts have also demonstrated quick deployment and implementation of a new policy, for example, banning benzocaine from most uses in the agency. See <a href="http://www.patientsafety.gov/alerts/Benzocaine-WWW.pdf">http://www.patientsafety.gov/alerts/Benzocaine-WWW.pdf</a> for the Alert and associated materials.</li> </ul>		
			<ul style="list-style-type: none"> <li>● DoD has developed and deployed TeamSTEPSTM to address teamwork and hand-off issues in healthcare.</li> <li>● Part of TeamSTEPSTM "training" includes the identification of current baseline measures of operations. Then, measuring again after training and after several months to ensure</li> </ul>	<p><b>5. Hold the gain</b> <i>Establish a new baseline and sustain the change/process improvement</i></p>
			<ul style="list-style-type: none"> <li>● One of the annual performance measures that was developed and supported by NCPS was improving the percentage of radiology reads occurring within 48 hours. One method of supporting this was developing contractual centers in different time zones allowing for the timely interpretation of</li> </ul>	
	<ul style="list-style-type: none"> <li>● Patient Safety is never referred to as a "program", rather it is recognized as a journey</li> <li>● Patient Safety Coaches will measure a change once it is implemented to sustain the gain</li> </ul>			
				<ul style="list-style-type: none"> <li>● Before any performance improvement plan is initiated timely metrics are defined.</li> <li>● Clinical decision support department helps define measures.</li> <li>● Measurement, Measurement, Measurement, they use metrics to</li> </ul>

<p><b>6. Engage the patient and/or families</b></p> <p><i>Collaborative Doctor and Patient relationship, and programmatic involvement of patients</i></p>	<p>new ways of working have been solidified.</p> <ul style="list-style-type: none"> <li>● DoD PSP has also offered sites analysis on culture survey results, to include action plans to address issue areas and sustain movement towards a culture of patient safety.</li> </ul>	<p>x-rays, regardless of the time or day. The VA's performance went from 67% to 90% in the span of two years. Another thing that has shown the sustained change that we've wanted to see is the continued increase of reporting of adverse events and close calls. Every year since inception in 1999 we have received more reports than the year before (over 450,000 total to date).</p>		<p>hold gains in place.</p> <ul style="list-style-type: none"> <li>● Looking at cycle time reduction and automation of metric gathering from electronic systems.</li> </ul>	<p><b>6. Engage the patient and/or families</b></p> <p><i>Collaborative Doctor and Patient relationship, and programmatic involvement of patients</i></p> <ul style="list-style-type: none"> <li>● "Speak Up" programmatic education developed and disseminated to facilities to educate patients in their role in their own healthcare.</li> <li>● The DoD PSP Website enables two-way communications between program staff and anyone with patient safety questions.</li> <li>● TMA Beneficiary Satisfaction Survey collects responses on six to eight patient safety-related questions.</li> <li>● On the newly released TRICARE website, Dr. Cassels has a "Blog" so that patients can write in with their concerns.</li> <li>● "Health Net" is a Website for TMA beneficiaries (<a href="http://www.hnfs.net">www.hnfs.net</a>), and the PSP plans to link to this site.</li> </ul>	<ul style="list-style-type: none"> <li>● The VA conducts extensive patient surveys that include questions on concerns regarding safety and quality of care. These results are reviewed by individuals that then report back to the specific facilities any concerns that are identified. The VA, through its team-based approach to care delivery, ensures that there is a relationship that develops between the care provider, the patient, and the patient's support network. Initiatives such as My Healthy Vet allow for the patient to develop specific profiles of information that he or she would like to share, and also to track specific information about their health. Satisfaction surveys consistently rank VA patients as above average in their satisfaction with the care that they receive.</li> </ul>	<ul style="list-style-type: none"> <li>● Established the "Coordinating Physician" role as a single point of contact for hospital care delivery for each patient</li> </ul>	<ul style="list-style-type: none"> <li>● Panels of patients are brought to annual conferences</li> <li>● Patients who have received less than optimal outcomes are invited to quarterly management meetings</li> <li>● Looking at involving patients in steering committees</li> <li>● Some patients involved in quality councils</li> <li>● In one facility family members can access a rapid response team via a "Help Line"</li> </ul>
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			<ul style="list-style-type: none"> <li>We have a special pilot project underway now called the "Daily Plan" that is designed to inform every inpatient about what they should expect with respect to their upcoming day in the hospital and related topics such as discharge. This has been well received in the pilot test and is likely to become a national initiative.</li> </ul>			
<b>IOM Domain – Applied Research Agenda</b>						
<b>1. Knowledge Generation</b>						
<b>a. High risk patient</b> <i>Identifying patients at high risk of experiencing a patient safety event</i>	<ul style="list-style-type: none"> <li>The Patient Safety Center looks for high-risk areas by analyzing reported data.</li> <li>Service and MTF staff likewise research data and look for high-risk areas that need addressed.</li> <li>All MTFs do a falls assessment, pain assessment, and a family support assessment to determine the patient's ability to care for themselves.</li> <li>Health Literacy educational materials provided by the PSP to the MTFs.</li> </ul>	<ul style="list-style-type: none"> <li>Applied practical research into the VA database results in identification of high risk patient areas</li> </ul>	<ul style="list-style-type: none"> <li>There is an annual assessment done of high-risk areas, patients experiencing extended Length of Stay (LOS) or Increased Volumes. Any potential problem areas identified are incorporated into annual Patient Safety goals for the next year.</li> </ul>	<ul style="list-style-type: none"> <li>Do identify high-risk patients through error reporting and trends identified there.</li> </ul>		
<b>b. Testing a fundamental assumption of near miss</b>	<ul style="list-style-type: none"> <li>All Patient Safety Center reports are available to facility Patient Safety and</li> </ul>	<ul style="list-style-type: none"> <li>Patient Safety Centers of Inquiry conduct research into</li> </ul>	<ul style="list-style-type: none"> <li>Apparent cause analyses of similar events are reviewed, any</li> </ul>	<ul style="list-style-type: none"> <li>Analysis group looks at near misses and event reports for trending</li> </ul>		

<p><b>analysis</b></p> <p><i>Analyses that inform a risk management program</i></p>	<p>also Risk Managers.</p> <ul style="list-style-type: none"> <li>The Patient Safety Program (PSP) is currently deploying a “secure” portion of the DoD PSP website where 1102 or otherwise restricted materials will be posted and accessed by password.</li> <li>MTF Patient Safety staff, often found to be “dual-hatted” with Risk Management, work in conjunction with risk management to reduce risks at the local level – either when they are found locally through analysis, or identified through resources provided by the DoD PSP, Service PSP, or an outside organization such as the Joint Commission, IHI, IOM, etc.</li> </ul>	<p>Patient Safety assumptions and methods.</p>	<p>intensive review of an event, National Patient Safety Goal audits and Closed Claims and Suits are reviewed to provide input into the Risk Management plan.</p>	<p><b>Sharp</b></p> <p>and issue identification.</p>
<p><b>c. Developing and testing a suitable recovery taxonomy</b></p> <p><i>Prevention of failure factors and FMEA completed on near misses</i></p>	<ul style="list-style-type: none"> <li>RCAs are conducted on sentinel events.</li> <li>RCAs are completed on Near Misses that reach a SAC level 3, at the discretion of the local commander.</li> <li>FMEAs required by JC and performed at the facility level for events and other process issues.</li> </ul>	<ul style="list-style-type: none"> <li>Root Cause Analyses are conducted on all events. Root Cause Analysis for Near Misses is based upon a triaging whereby the severity and probability are reviewed for both actual events, and the potential severity associated with a close call. In addition, facilities have the latitude, and often exercise it, to look at close calls that are not mandated by our office.</li> </ul>	<ul style="list-style-type: none"> <li>Apparent Cause analysis is conducted on all near misses and used to focus change effort</li> <li>Annual FMEA performed as a system to address a system wide issue with development of improved processes and procedures for all patient care areas impacted by the FMEA.</li> </ul>	<ul style="list-style-type: none"> <li>Sharp has an FMEA mindset.</li> <li>Each organization does them as required by the Joint Commission.</li> <li>If the organization sees potential risks then it embarks on an FMEA – e.g. Implementing a pharmacy off site – will do an FMEA to define potential risks, handling defective devices, etc.</li> </ul>
<p><b>d. Integrating individual human error/recovery models with team-based error/recovery models</b></p>	<ul style="list-style-type: none"> <li>TeamSTEPSTM is used to educate staff within specific units on how best to work together and communicate to ensure safe care delivery.</li> </ul>	<ul style="list-style-type: none"> <li>Medical Team Training model is used to educate staff on team approach to reducing patient errors</li> </ul>	<ul style="list-style-type: none"> <li>We have been providing Crew Resource Management (CRM) training in several of our Operating Rooms, Emergency Departments and Labor and</li> </ul>	<ul style="list-style-type: none"> <li>Team Training – see above.</li> </ul>

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<p><i>Team Communication training</i></p>	<ul style="list-style-type: none"> <li>● MHS has implemented Rapid Response Teams as a way to deal with specific medical conditions as they arise.</li> <li>● Clinical Microsystems Framework utilizes clinician language and processes for small-scale systems improvement efforts within the clinical setting.</li> </ul>	<p>Delivery areas.</p>	<ul style="list-style-type: none"> <li>● The Patient Safety Center conducts retrospective analyses of past events</li> <li>● The DoD PSC conducts prospective analysis only on those FMEAs forwarded voluntarily from the Service headquarters.</li> <li>● The DoD PSP and Service PS Service Representatives distribute materials designed to address potential risk areas and encourage facilities to proactively address these risks to prevent potential events in the future.</li> </ul>	<ul style="list-style-type: none"> <li>● Sharp analyses monthly and quarterly data and tries to identify existing problems and potential risks, then acts to address both.</li> </ul>
<p><b>e. Integration of retrospective and prospective techniques</b></p> <p><i>Analysis of past events and predictive analysis of potential future events</i></p>	<ul style="list-style-type: none"> <li>● Per the Joint Commission, each accredited program at a hospital must conduct a proactive risk assessment annually. The VA developed the framework for the Healthcare Failure Mode Effects Analysis (HFMEA), which is used by patient safety staff at each facility. To date, hundreds of such analyses have been conducted. Twice we have had national efforts to encourage and allow the roll-up of results. Initially, all facilities focused upon back up plans for dispensing medications should their facility lose the electronic bar code medication system. Last year, all facilities conducted an assessment of some aspect of their cleaning and sterilizing process for equipment, with different facilities given specific areas to focus upon. The results were summarized and shared nationally as a learning tool on best practices and lessons</li> </ul>	<ul style="list-style-type: none"> <li>● Analysis is conducted on events when they occur.</li> <li>● STAR helped reduce probability of making an error by a factor of 10.</li> </ul>		

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<p><b>f. Cost/benefit analysis of patient safety programs</b></p> <p><i>Reduction of PS related events and effects</i></p>	<ul style="list-style-type: none"> <li>Healthcare Team Coordination contracted for an independent evaluation of TeamSTEPS™ training and this indicated that sustainment was an issue.</li> <li>The DoD PSP conducted two separate economic analyses on the use of electronic reporting systems.</li> <li>Tripler rapid response system has specifically reduced ICU admissions, and mortality, essentially paying for itself.</li> </ul>	<ul style="list-style-type: none"> <li>VA has conducted analyses to demonstrate the relative merit for the PS program and establish the relative investment made in safety vis a vis the expense of adverse events. Some of the results have involved groups of hospitals (such as a falls collaborative with 37 participating facilities). Much of the analysis has focused upon assisting individual facilities in developing their own benefit-cost analysis for their particular initiative or effort.</li> </ul>	<ul style="list-style-type: none"> <li>Board of Directors understands that the hospital has caused harm to patients, that was unacceptable, and now has a commitment to drive such behaviors out of operations</li> <li>Number of malpractice claims is monitored as a proxy for patient safety program effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>Six Sigma workouts have defined specific cost benefits (Cerner, Central Pharmacy)</li> </ul>
<p><b>g. Patient roles</b></p> <p><i>System should be able to accept event reporting from patients and patients have an active role in prevention</i></p>	<ul style="list-style-type: none"> <li>The DoD welcomes and encourages the identification of issues related to care received, and perceived safety or quality concerns. Patient Safety Managers and Risk Managers will review reported events, regardless of their initial source.</li> <li>Each MTF has a patient advocate whose responsibility is to assist patients and their families with issues in care or coordination. The advocates can function as a method by which such concerns are entered into the patient safety program. Patients can file concerns related to safety or care through any level of the organization, to the Commanders office.</li> <li>L&amp;D Unit – “Team Up” which</li> </ul>	<ul style="list-style-type: none"> <li>The VA welcomes and encourages the identification of issues related to care received, and perceived safety or quality concerns. Patient Safety Managers will review reported events, regardless of their initial source. Each VAMC has a patient advocate whose sole responsibility is to assist patients and their families with issues in care or coordination. The advocates can function as a method by which such concerns are entered into the patient safety program.</li> <li>Patients cannot input an event into the electronic reporting system</li> </ul>	<ul style="list-style-type: none"> <li>Past patients provide advice and sit as members on the Patient Advisory Board and the Patient Safety Coach committee</li> <li>Incoming patients are educated on playing an active role in maintaining their own safety</li> <li>Patients have access to a “Promise Line” where they can call and offer complaints or input on care or events that have occurred to them.</li> <li>Patient Advocates make regular rounds to patient care areas soliciting input from</li> </ul>	<ul style="list-style-type: none"> <li>Sharp invites patients who have experienced adverse events to come back to the organization and share their experiences so all staff can learn.</li> <li>Patients cannot input an event into the electronic reporting system – maybe for the future</li> </ul>

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<p><b>h. Evaluating the impact of new technologies for</b></p>	<p>advocates the patient at the center of the care team – patients call huddles when concerned about care.</p> <ul style="list-style-type: none"> <li>● Patients cannot input an event into an electronic reporting system</li> </ul>	<ul style="list-style-type: none"> <li>● Event reporting is electronic</li> </ul>	<p>patients on their care and their perceptions of any care issue they may perceive as an event.</p> <ul style="list-style-type: none"> <li>● Two facilities (with a third in process) have active Patient/Family Advisory Councils which provide input and feedback to Hospital Patient Safety and Quality programs; sitting in on individual hospital committees and task force groups working on specific issues i.e.: A Committee to Facilitate End of Life Decision Making (DNR) process and documentation.</li> <li>● Two facilities have actively initiated a "F.I.R.R.S.T."</li> </ul> <p>program: Family Initiated Rapid Response Safety Team which provides information to patient families about how to dial a number to request a team come immediately to evaluate a change they have noted in their loved one's condition. All facilities will have the program in place before the end of 2008. This is a family initiated Medical Response Team (MRT).</p> <ul style="list-style-type: none"> <li>● Patients cannot input an event into an electronic reporting system</li> </ul>	<ul style="list-style-type: none"> <li>● Sharp is working with Cerner to design the best way to improve Cerner</li> </ul>

<p><b>detecting near misses</b></p> <p><i>Proactively looking at new technologies to determine how they can improve patient safety</i></p>	<p>systems</p> <ul style="list-style-type: none"> <li>All evaluations occur through the IT program offices (Resource Information Technology Program Office; Clinical Information Technology Program Office; Theater Medical Information Program) and has active proponents from the functional users. Currently the EMR has a PhD RN who works with the PSP and Clinical Information Technology Program Office for trouble tickets considered patient safety issues. The RITPO works directly with the PSP to manage the MEDMARX® and TAPROOT™ application as well as the Web-based reporting systems, currently under review.</li> </ul>	<ul style="list-style-type: none"> <li>VA has a PS Center of Inquiry dedicated to evaluating new technology and its ability to enhance patient safety (located in White River Junction, VT).</li> <li>We fund Patient Safety Centers for Inquiry (PSCIs) every two years based upon identified subject matter areas for research. Topics have included reducing injuries associated with falls, enhanced safety of chemotherapy, medication reconciliation through e-kiosks, fatigue management, simulation of anesthesia suites, to name but a few. These centers have a very operational and practical point of view, with the goal being dissemination of information that has a practical application. A second method is through the funding of Patient Safety Initiatives, which is a small grant program for field-generated research. Topics have included the evaluation of different lift devices, scientific and biologic evaluation of the effectiveness of UV lights in disinfecting equipment and keyboards, use of low-fidelity simulation to enhance central line placement and intubation.</li> </ul>	<p>pharmacy tool. Moving to EPIC Tool for the entire paperless medical record and Computerized Physician Order Entry. Started Feb 08 with first hospital – to be completed over next two years. Moving to electronic reporting of events.</p> <ul style="list-style-type: none"> <li>Patient Safety Leaders in the organization are consulted to review various technologies in relationship to impact to patient safety.</li> <li>Currently event reporting is paper based, process in place to implement an electronic on-line reporting system in 2008.</li> </ul>	<p><b>Sharp</b></p> <p>EHR to enable early identification of alerts or to prevent errors through clinical decision support.</p> <ul style="list-style-type: none"> <li>Currently barcode technology is being used for bedside blood glucose testing and is being evaluated for use with breast milk, with plans to implement with IV medications within the next few years.</li> <li>Alaris infusion pumps with guardrails is utilized throughout the organization to assist RNs in programming the infusion pumps within the determined safe infusion limits, and detect errors in programming before it reaches the patient. Pump activity is analyzed regularly and adjustment to guardrails limits is subsequently made to further ensure safety.</li> </ul>
<p><b>2. Tool Development</b></p>				

				<p><b>a. Early detection</b></p> <p><i>Automated triggers and event monitoring are used to detect signals related to potential events</i></p>
<p>● Have an electronic medical record.</p> <p>● Does not conduct automated surveillance.</p>	<p>● e-ICU tool is used for early prevention. The e-ICU system has extensive algorithms in place that automatically monitor patients and identifies subtle changes to patient condition, sending out alerts for response by Registered Nurses monitoring patients from the e-ICU. Also, one facility is piloting an e-Hospital system in an acute care Nursing unit which has a camera resource to visualize individual patients and similar algorithms in place which automatically monitor subtle changes in condition sending alerts to an RN monitoring these patients who in turn requests a bedside RN or LPN to check the patient and intervene.</p>	<p>● Use of Alaris smart pumps.</p> <p>● Sharp is working with Cerner to design the best way to improve Cerner EHR to enable early identification of patient issues.</p>	<p>● Have an electronic medical record.</p> <p>● Does not conduct automated surveillance.</p>	<p>● Several Rapid Response Systems now in place which requires manual monitoring to actively track triggers related to changes in patient conditions.</p> <p>● Some MTFs have Rapid Response Systems. – Alerted by pre-established clinical criteria, and then once activated a separate unique team of people respond to bedside and take over care of patient. – results show a decrease in ICU admissions and reduced mortality.</p>
<p>● Protocols, algorithms, and clinical pathways exist and are used within the VA and supported by our HER.</p>	<p>● e-ICU tool is used for early prevention.</p>	<p>● Alaris Smart Pumps by Cardinal, medication infusion pumps that have software that allows them to be programmed with safety features for every type of medication or fluid which then prompts caregiver if the pump is trying to be programmed outside of guard rails. Pump Log Data can be downloaded wirelessly, analyzed and then the software can be re-programmed as appropriate. Soft Stops and Hard Stops can be programmed into the pumps.</p>	<p>● Protocols, algorithms, and clinical pathways exist and are used within the VA and supported by our HER.</p>	<p><b>b. Prevention capabilities</b></p> <p><i>Point of care decision support systems are leveraged to enhance patient care</i></p>
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	<ul style="list-style-type: none"> <li>The Pharmacy Data Transactional System supports some elements of point of care decision support.</li> </ul>						
<p><b>c. Verifying adverse events</b></p> <p><i>Standardized definitions and coding of adverse events throughout organization</i></p>	<ul style="list-style-type: none"> <li>Standardized coding system and taxonomy is used for patient safety events.</li> <li>Dental has its own taxonomy, not identical to the PSCs event reporting taxonomy.</li> </ul>	<ul style="list-style-type: none"> <li>Standardized coding system and taxonomy for patient safety events used for all RCA reports and also reports in four relatively frequent areas: falls, adverse drug events, missing patients, and suicide-related events.</li> </ul>	<ul style="list-style-type: none"> <li>Standardized coding of events.</li> </ul>	<ul style="list-style-type: none"> <li>Adopted MERP guideline – Zero to Eight (A through I for pharmacists).</li> <li>All parts of the org are on one database using the same reporting system.</li> </ul>			
<p><b>d. Developing data mining techniques for large patient safety databases</b></p> <p><i>Detailed data analytics are conducted to uncover patterns of events and test hypotheses</i></p>	<ul style="list-style-type: none"> <li>Patient Safety Center conducts ongoing analysis of the Patient Safety Repository to uncover trends, risk areas, etc.</li> <li>Services and MTFs also conduct analysis at the Service and local level to uncover patterns of events or potential risks.</li> <li>Patient Safety Center currently using the Megaputer Polyanalyst tool, which is the same data mining tool used by the VA. Polyanalyst tool to mine both structured and unstructured text.</li> </ul>	<ul style="list-style-type: none"> <li>Data mining techniques used to explore extensive Root Cause Analysis database.</li> </ul>	<ul style="list-style-type: none"> <li>Event reporting data base is analyzed and results are used to focus change efforts.</li> </ul>	<ul style="list-style-type: none"> <li>PS database – site administrators at each facility and the central administrators get data out that they need.</li> <li>Meet quarterly to share information and learn from each other.</li> <li>Alaris CQI data group looks at the reports, guard rails task force looks at the data again to make sure influence and input is broad enough to minimize risks to patients.</li> <li>CDF department pulls out metrics for system goals.</li> </ul>			
<p><b>e. Natural language processes</b></p> <p><i>Ability to mine and analyze data that are in notes,</i></p>	<ul style="list-style-type: none"> <li>Patient Safety Center currently using the Megaputer Polyanalyst tool, which is the same data mining tool used by the VA. Polyanalyst tool to mine both structured and unstructured</li> </ul>	<ul style="list-style-type: none"> <li>The VA developed performance specs, solicited bids, and procured NLP software that is used by our PhD biostatistician and</li> </ul>	<ul style="list-style-type: none"> <li>No natural language processing.</li> <li>However, they have an entire</li> </ul>	<ul style="list-style-type: none"> <li>No natural language processing.</li> <li>However, they can design data queries by Pick Lists and specific</li> </ul>			

<p><i>incident report etc.</i></p>	<p>text.</p>	<p>analysts with our patient safety database. Keen interest in this product has been expressed by DoD representatives, as well as individuals from other countries as they begin their patient safety program. This software allows for the effective mining of qualitative and narrative language with a high degree of sensitivity and specificity.</p>	<p>Clinical Business Intelligence department that analyzes and interprets data for Physicians, Nurses and other front line providers to improve patient care processes. This department designs and implements data management strategies to transform data into actionable information for improving outcomes and evaluates performance of medical providers/facilities and to ensure the quality, efficiency and effectiveness of medical care. They provide research and statistical modeling support.</p>	<p>words.</p> <p><b>Sharp</b></p>
<p><b>3. Dissemination</b></p>				
<p><b>a. Knowledge dissemination</b></p> <p><i>Tools and methods are identified and used to rapidly communicate improvement approaches for administrators, providers and patients</i></p>	<ul style="list-style-type: none"> <li>● DoD uses existing communication pyramid to disseminate information.</li> <li>● Newsletters, alerts, advisories, focused reviews and posters and signage in the facilities.</li> <li>● Facilities share information on monthly Service patient safety conference calls.</li> </ul> <p>Patient safety information posters, brochures, etc. available at MTFs for patients to read.</p>	<ul style="list-style-type: none"> <li>● VA uses a robust online environment for collecting and communicating patient safety-related information.</li> <li>● VA NCPS also issues a paper newsletter (also available electronically) and prints and sends copies of every bimonthly issue to all VA medical centers. This is intended to reach people that might not take the time to look up the newsletter on the web site...</li> </ul>	<ul style="list-style-type: none"> <li>● Multiple communication channels are used; TV, coaches committee, stand-downs, signage.</li> <li>● Patients receive patient safety related information over the hospital television network.</li> </ul>	<ul style="list-style-type: none"> <li>● Published article in Journal of Patient Safety addressing issues with connectors.</li> <li>● Working on a Website that allows staff to access information on issues, near misses, risks, etc.</li> </ul>
<p><b>b. Audit procedures</b></p> <p><i>A program exists for audit assurance</i></p>	<ul style="list-style-type: none"> <li>● Some facilities are placing metrics against National Patient Safety Goals and auditing for results.</li> </ul>	<ul style="list-style-type: none"> <li>● NCPS audits each facility once every three years and during these audits check to see if alerts are responded to</li> </ul>	<ul style="list-style-type: none"> <li>● Coaches audit the staff for BBES and other metrics.</li> <li>● Audits of NPS goal measures</li> </ul>	<ul style="list-style-type: none"> <li>● Sharp conducts healthcare observation audits and measures.</li> <li>● Committees in place to ensure that</li> </ul>

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	<ul style="list-style-type: none"> <li>Variety of ways to conduct recall among the Services. In common is the MMQC messages from USAMMA. AF using ECRI, Navy using some of the modules in ECRI and one Army facility using RASMAS®.</li> </ul> <p>Service / MTFs cannot see what actions are taken at to determine if facilities have responded to recalls.</p>	<p>and complied with.</p> <ul style="list-style-type: none"> <li>Automated recall system and follow up audits to ensure that recalled items are completely removed from operational environment.</li> </ul>	<p>and validation for reporting to Joint Commission - results in a red light /green light report for the organization to use to monitor progress.</p> <ul style="list-style-type: none"> <li>Audit done with patients to determine level of knowledge about risk assessments and to determine if the NPS goals are being met by the staff.</li> <li>Moving to electronic audits.</li> </ul>	<p>observational measures are being captured.</p>